DAVID C. SHEPARD

VS.

NORTHERN PACIFIC RAILWAY COMPANY, ET AL.

COMPLETE INDEX

	PAGE.
JOHN B. BAIRD:	
Direct examination, Vol 3	1434–1492
Complainant's Exhibit 35	1441
" " 36	1445
" " 37	1447
" " 38	1447
" " 39	1448
" " 40	1459
" " 41	1460
" " 42	1472
" " 43	1483
" " 44	1486
" " 45	1488
" " 46	1491
Cross-examination	1492–1514
Re-direct examination	1514–1531
Complainant's Exhibit 47	1523
" " 48	1528
Re-cross examination	1531–1591
JOHN B. BAIRD—Recalled for Complainant:	
Direct examination, Vol. 4	2187–2194
Complainant's Exhibit 67	2190
Cross-examination	2194–2208
Re-direct examination	2208–2209
Re-cross examination	2209–2211
FRED E. BARNEY:	
Direct examination, Vol. 2	1092–1098
Cross-examination	1098–1108
Re-direct examination	1108–1109
Re-cross examination	1109–1113

JOHN B. BERRY: PAGE.

Direct examination, Vol. 2..... 718–756
Complainant's Exhibit 24..... 722
" " 25..... 727
Cross-examination 756–886
Complainant's Exhibit 26..... 842
Re-direct examination 886–899
Re-cross examination 900–904

CHARLES W. BUNN—For Complainant:

Direct examination, Vol. 4.....2183–2185
Cross-examination 2185–2186

ALEX. M. CLELAND:

Direct examination, Vol. 3.....1599–1622
Complainant's Exhibit 49..... 1604
" " 50..... 1608
" " 51..... 1611
" " 52..... 1614
" " 53..... 1616
Cross-examination 1622–1657

THOMAS COOPER:

Direct examination, Vol. 1..... 122–147
Complainant's Exhibit 8..... 125
" " 9..... 126
" " 10..... 133
" " 11..... 141
Cross-examination 147–238
Defendants' Exhibit C..... 172
Re-direct examination 238–259
Complainant's Exhibit 12..... 238

THOMAS COOPER—Recalled:

Cross-examination 420–444
Defendants' Exhibit L..... 421
" " M..... 426
" " M-1..... 436
Re-direct examination 444–452
Re-cross examination 453–454

THOMAS COOPER—Recalled: PAGE.

Direct examination, Vol. 2.....1059–1071
Complainant's Exhibit 29..... 1061
" " 30..... 1064
Cross-examination 1071–1092

THOMAS COOPER—Recalled for Complainant:

Direct examination, Vol. 6.....3040–3077
Complainant's Exhibit 70..... 3041
" " 71..... 3043
" " 72..... 3047
" " 73..... 3049
" " 74..... 3052
" " 75..... 3055
" " 76..... 3062
" " 77..... 3068
" " 78..... 3077
Cross-examination 3078–3119
Re-direct examination 3119–3121

WILLIAM L. DARLING:

Direct examination, Vol. 1..... 5–47
Complainant's Exhibit 1..... 6
" " 2..... 7
" " 3..... 55
Cross-examination 47–121
Defendants' Exhibit B..... 114
Complainant's Exhibit 4..... 118
" " 5..... 121
" " 6..... 121
" " 7..... 121

WILLIAM L. DARLING—Recalled:

Direct examination 534–536
Cross-examination 536–566
Re-direct examination 566–578
Re-cross examination 578–590
Defendants' Exhibit R..... 585
" " S..... 586
" " T..... 593

WILLIAM L. DARLING—Recalled:

Cross-examination, Vol. 2..... 936–988
Defendants' Exhibit FF..... 936
Re-direct examination 988–1005

PAGE.

Re-cross examination 1005–1008
Defendants' Exhibit JJ..... 1005
" " KK..... 1005
" " LL..... 1005
Re-direct examination 1008–1016
Re-cross examination 1016–1023

WILLIAM L. DARLING—Recalled for Complainant:
Direct examination, Vol. 6.....3207–3229
Complainant's Exhibit 81..... 3212
" " 82..... 3214
" " 83..... 3221
" " 84..... 3223
" " 85..... 3229
Cross-examination 3229–3233
Re-direct examination 3233–3241
Complainant's Exhibit 86..... 3233
Re-cross examination 3241–3247

HOWARD ELLIOTT:
Direct examination, Vol. 3.....1217–1289
Complainant's Exhibit 32..... 1287
" " 33..... 1287
" " 34..... 1288
Cross-examination 1289–1376
Defendants' Exhibit NN..... 1343
Re-direct examination 1376–1390
Re-cross examination 1390–1420

HOWARD ELLIOTT—Recalled for Complainant:
Direct examination, Vol. 6.....3121–3151
Complainant's Exhibit 79..... 3122
" " 80..... 3122
Cross-examination 3151–3194
Re-direct examination 3194–3207
Complainant's Ex. 80–A..... 3204

HOWARD ELLIOTT—Recalled for Complainant:
Cross-examination, Vol. 7.....3556–3582

LESTER B. ELWOOD:
Direct examination, Vol. 1..... 480–487
Complainant's Exhibit 22..... 483
Cross-examination 487–502
Re-direct examination 502–504
Re-cross examination 504–507

LESTER B. ELWOOD—Recalled: PAGE.

Direct examination, Vol. 2.....1024–1032
Cross-examination 1032–1048
Re-direct examination 1048–1053
Re-cross examination 1053–1059

ALLAN L. FLINN—For Defendants:

Direct examination Vol. 5.....2384–2419
Defendants' Exhibit YY..... 2387
" " ZZ..... 2406
" " 3-A..... 2408
" " 3-B..... 2418
Cross-examination 2419–2511
Re-direct examination 2512–2516
Re-cross examination 2516–2521

H. A. GRAY:

Direct examination, Vol. 1..... 259–275
Complainant's Exhibit 14..... 266
" " 15..... 270
" " 16..... 270
" " 17..... 271
" " 18..... 272
" " 19..... 273
Cross-examination 275–416
Complainant's Exhibit 20..... 274

H. A. GRAY—Recalled:

Cross-examination, Vol. 2..... 592–718
Defendants' Exhibit U..... 594
" " V..... 609
" " W..... 669
" " Y..... 673
" " Z..... 676
" " AA..... 685
" " BB..... 709
" " CC..... 715
" " EE..... 718

H. A. GRAY—Recalled:

Direct examination, Vol. 2..... 905–936
Complainant's Exhibit 28..... 932

H. A. GRAY—Recalled:

Cross-examination, Vol. 3.....1162–1211
Defendants' Exhibit MM..... 1163
Re-direct examination 1211–1216

CONWAY W. HILLMAN—Recalled for Defendants: PAGE.
Direct examination, Vol. 6.....3268–3450
Defendants' Exhibit 3–L..... 3276
" " 3–M..... 3279
Cross-examination 3450–3484
Re-direct examination 3484–3485
Re-cross examination 3485–3553

CONWAY W. HILLMAN—Recalled for Defendants:
Cross-examination, Vol. 7.....3582–4107

CONWAY W. HILLMAN—Recalled for Defendants:
Direct examination 4122–4154
Defendants' Exhibit 3–N..... 4136
" " 3–O..... 4139
" " 3–P..... 4151
Cross-examination 4154–4170
Defendants' Exhibit 3–Q..... 4164

CONWAY W. HILLMAN—Recalled for Defendants:
Direct examination 4243–4250
Defendants' Exhibit 3–V..... 4246
" " 1–Master..... 4246

WILLIAM G. JOHNSON:
Direct examination, Vol. 3.....1657–1700
Complainant's Exhibit 54..... 1659
" " 55..... 1664
" " 56..... 1668
" " 57..... 1671
" " 58..... 1672
" " 59..... 1677
" " 60..... 1682
" " 61..... 1684
" " 62..... 1688
" " 62-A..... 1688
" " 62–B, C, D, E F, G, H..... 1692
" " 63..... 1694
" " 64..... 1697
Cross-examination 1700–1760

WILLIAM G. JOHNSON—Recalled:
Cross-examination, Vol. 4.....2212–2239

WILLIAM G. JOHNSON—Recalled for Complainant: PAGE.
Direct examination, Vol. 6.....3248–3256
Complainant's Exhibit 87..... 3252
" " 88..... 3252
Cross-examination 3257–3266
Re-direct examination 3267–3268
Complainant's Exhibit
Elliott (Johnson) 80-B..... 3256

WILLIAM G. JOHNSON—Recalled for Complainant:
Cross-examination, Vol. 7.....4107–4121

WILLIAM G. JOHNSON—Recalled for Complainant:
Direct examination 4214–4227
Complainant's Exhibit 90..... 4215
" " 91..... 4215
" " 92..... 4216
" " 93..... 4223
Cross-examination 4227–4237
Re-direct examination 4237–4239

MASTER AND COUNSEL:
Discussion 2240–2261

DWIGHT C. MORGAN—Called for Defendants:
Direct examination, Vol. 4.....1762–1970
Defendants' Exhibit OO..... 1833
" " PP..... 1834
" " OO-1, 2, 3..... 1835
" " OO-4, 5, 6..... 1836
" " QQ..... 1838
Cross-examination 1970–2105
Re-direct examination 2105–2135
Re-cross examination 2135–2182
Defendants' Exhibit RR..... 2131
Complainant's Exhibit,
Report to Commission..... 2171
Complainant's Exhibit 65..... 2172
" " 66..... 2172

DWIGHT C. MORGAN—Recalled for Defendants:
Direct examination 2262–2273
Defendants' Exhibit TT..... 2262
" " UU..... 2265
" " VV..... 2265
" " WW..... 2265
" " XX..... 2268

PAGE.
Cross-examination 2273–2294
Re-direct examination 2294–2295
Re-cross examination 2295–2358
Re-direct examination 2358–2362
Re-cross examination 2362–2382

DWIGHT C. MORGAN—Recalled for Defendants:
Cross-examination, Vol. 5.....2522–2544
Complainant's Exhibit 68..... 2537
Re-direct examination 2544–2554
Re-cross examination 2554–2573
Re-direct examination 2573–2575
Re-cross examination 2575–2607

DWIGHT C. MORGAN—Recalled for Defendants:
Direct examination, Vol. 7.....4177–4191
Defendants' Exhibit 3-R..... 4178
" " 3-S..... 4178
" " 3-T..... 4182
Cross-examination 4191–4213

WILLIAM C. READ:
Direct examination, Vol. 3.....1116–1128
Cross-examination 1128–1156
Re-direct examination 1156–1158
Re-cross examination 1158–1162

CHARLES F. STAPLES—For Defendants:
Direct examination Vol. 5.....2607–2697
Defendants' Exhibit 3-C..... 2614
" " 3-D..... 2633
" " 3-E..... 2653
" " 3-F..... 2655
" " 3-G..... 2676
" " 3-H..... 2678
" " 3-I..... 2682
" " 3-J..... 2685
Cross-examination 2697–2969
Complainant's Exhibit 69..... 2756
Re-direct examination 2969–2978
Re-cross examination 2979–2987
Re-direct examination 2988–3003
Defendants' Exhibit 3-K..... 2988
Re-cross examination 3003–3038

CHARLES F. STAPLES—Recalled for Defendants: PAGE.
Direct examination, Vol. 7.....4239–4241
Defendants' Exhibit 3–U..... 4241
Cross-examination 4241–4243

JOHN D. STRYKER:
Direct examination, Vol. 1..... 454–468
Complainant's Exhibit 21..... 461
Cross-examination 468–478
Re-direct examination 478–479

McNEIL V. SEYMOUR:
Direct examination, Vol. 3.....1591–1592
Cross-examination 1593–1598

OSCAR L. TAYLOR:
Direct examination, Vol. 3.....1420–1430
Cross-examination 1430–1434

JOHN J. WATSON:
Direct examination, Vol. 1..... 507–514
Cross-examination 514–534
Defendants' Exhibit O..... 528
Complainant's Exhibit 23..... 513

THOMAS YAPP—For Defendants:
Direct examination, Vol. 7.....4171–4177

UNITED STATES CIRCUIT COURT,

DISTRICT OF MINNESOTA,

THIRD DIVISION.

(In Equity.)

DAVID C. SHEPARD,

Complainant,

vs.

NORTHERN PACIFIC RAILWAY COMPANY, GEORGE T. SIMPSON, IRA B. MILLS, CHARLES F. STAPLES, CHARLES E. ELMQUIST, E. A. EVARTS, O. J. WHITEMAN, J. RUMSEY REEVE, ACHILLE MICHAUD, CHARLES MICHAUD AND ADOLPH MICHAUD,

Defendants.

APPEARANCES:

HOW, BUTLER & MITCHELL,
Solicitors for Complainant.

EDWARD T. YOUNG, Attorney General,
THOMAS D. O'BRIEN and EDMUND S. DURMENT,
Solicitors for members of the Railroad and Warehouse Commission, et al.

VOLUME 7.

CHAS. E. OTIS, Master.

GEO. N. HILLMAN, Reporter.

FEDERAL BUILDING, St. Paul, Minn., Wednesday, June 28, 1911, the hearing was resumed at 10 A. M.

HOWARD ELLIOTT,
recalled for further cross-examination, testified:

By Mr. O'BRIEN:

Q. Mr. Elliott, have you with you a statement, prepared as requested, with reference to the assets of the Northwestern Improvement Company?

A. Yes, sir.

Q. Have you that statement in writing?

A. It is right here (producing statement).

Mr. O'BRIEN: If satisfactory, this may be handed to the Reporter and copied by him into the record.

The MASTER: That is satisfactory.

Said statement is as follows:

"A BRIEF HISTORY OF THE ORIGIN AND DEVELOPMENT OF THE NORTHWESTERN IMPROVEMENT COMPANY.

"When the Northern Pacific Railway Company acquired the property of the Northern Pacific Railroad Company in 1896, the title to considerable property in St. Paul located between Fourth and Sixth streets, purchased and paid for by the Northern Pacific Railroad Company at a cost of $869,881.38, stood in the name of various individuals as trustees; said property was purchased for the purpose of providing additional terminal facilities for the Northern Pacific Railroad Company, the greater portion of it is now in use for that purpose, and has been conveyed by the Improvement Company to the Railway Company. The portion of this property still owned by the Improvement Company appears in the list of assets attached as 'Town Lots, St. Paul, Minnesota.'

"Also, the title to certain property in Minneapolis near the

union depot, purchased and paid for by the Northern Pacific Railroad Company at a cost of $308,746.22, stood in the name of the Minneapolis Terminal Company; the property in question was acquired for the purpose of establishing a union passenger depot, in conjunction with other railroads, and is still held for that purpose; it is included in the list of assets of the Improvement Company as 'Town Lots, Minneapolis.'

"Also, immediately after the Northern Pacific Railway Company acquired the property of the Northern Pacific Railroad Company, it sold certain of its outstanding land contracts covering sales of its land-grant lands, for $1,223,000, using the money received therefrom to purchase and retire general first mortgage bonds and Pend d'Oreille division bonds of the Northern Pacific Railroad Company, bearing interest at 6 per cent, and redeemable from the proceeds of the sale of the land-grant. The land contracts, or the bulk of them, were later acquired by the Improvement Company at the price at which they had been sold. Such of the contracts as have not been paid up, are included in the item of assets of the Improvement Company as 'Accounts Receivable.'

"In October, 1897, the Northwestern Improvement Company was organized under the laws of New Jersey, for the immediate purpose of acquiring and holding the properties at St. Paul and Minneapolis and the land contracts above referred to, and said properties were conveyed to it, the Improvement Company paying therefor $2,000,000, of which $1,000,000 was in capital stock and $1,000,000 in four per cent debenture bonds, being the entire amount of the capital stock and bonds issued by the Improvement Company at the time of its organization.

"When the Improvement Company was organized, no one anticipated that it would attain its present magnitude, but, as time went on, it was found convenient and desirable that in a growing region, an organization should exist adapted for

and capable of handling enterprises not coming under the head of transportation, but which would be helpful in developing the business of the Railway Company and the territory tributary to it and at the same time, if the enterprises were successful, make a profit that might ultimately go to the latter's stockholders. The original scope of the Improvement Company was enlarged to meet this situation. To pay for additional properties acquired, it has from time to time increased its capital stock and issued additional bonds; the amount of its capital stock being March 31, 1909, $2,775,000, and of its bonds $8,298,140.57, all of which stock and bonds are owned by the Northern Pacific Railway Company and held in its treasury, excepting bonds to the amount of $1,298,140.57 deposited with the trustee of the St. Paul-Duluth division mortgage, as hereinafter explained.

"One of the earlier important transactions of the Improvement Company was the purchase in October, 1897, from the Railway Company of all of the land-grant lands of the latter then unsold between the Missouri river and Glendive, Mont., aggregating about five and a half million acres, for a consideration of $1,755,000. The purpose of this sale was to provide money to pay off the Missouri river division mortgage of the Northern Pacific Railroad Company, which bore six per cent interest, and which could only be paid off from the proceeds of the sale of the mortgaged lands. Such of the lands as are still unsold appear in the list of assets of the Improvement Company as 'Lands, Western North Dakota and Eastern Montana.'

"In furtherance of the plan of divesting itself of all outside properties not directly used for the operation of the railroad and vesting them in the Improvement Company, the Railway Company in July, 1899, sold all of its coal properties to the Improvement Company; said properties at that time being located at Roslyn, Wash., Timberline, Mont., Bull Mountain,

Mont., and in Stark county, N. D. The Improvement Company has since acquired by purchase from various parties additional property at Roslyn, Wash., and has also made a lease of some coal lands at Clealum, Wash.; it acquired from the Seattle & San Francisco Railway & Navigation Co. the coal property at Ravensdale, Wash., and supplemented the property so purchased by purchasing from the Railway Company some of its land-grant lands now a part of the Ravensdale coal-field; it purchased from the Railway Company the lands constituting the Melmont, Wash., coal property, which were a part of the Railway Company's land-grant; it purchased from the Union Pacific Coal Company, Chestnut Coal Company, Boseman Coal Company, Mountainside Coal Company, Northern Pacific Railway Company, and various other parties, the property which now constitutes its Chestnut and Timberline coal properties; the principal part of its Red Lodge and Bear Creek coal properties was acquired by the purchase of the Rocky Fork Coal Company, which purchase has been supplemented by purchases made from various other parties since. A detailed statement of the various coal properties owned by the Improvement Company would be voluminous because of the large number of different purchases made, would require some time for its preparation, and would have to be made up from the records of the comptroller's office at Tacoma, Washington; it would take perhaps two months to prepare, as it would involve the examination of the records of every purchase. These properties appear in the list of assets of the Improvement Company under the heading of 'Coal Properties.'

"Another of the large transactions of the Improvement Company was the purchase from the Railway Company of 103,194.35 acres of coal lands, or supposed coal lands, in the state of Washington. The sale included all lands known to contain coal, also all lands in their vicinity, and undoubtedly a considerable portion of them will prove to be valueless as coal

property when explored. The portion of these lands not disposed of appear in the list of assets of the Improvement Company under the heading of 'Lands, Western Washington.'

"Still another important transaction was the acquisition by the Improvement Company of the land-grant property of the St. Paul & Duluth Railroad Company. When the property of the St. Paul & Duluth Railroad Company was purchased by the Northern Railway Company, the unsold portion of the land-grant of the Duluth Company was bought by the Improvement Company, and it deposited as security for the purchase price with the trustee of the St. Paul-Duluth division mortgage $4,000,000 of debenture bonds of the Improvement Company. These bonds are redeemed and canceled from time to time as payments are made to the trustee of the St. Paul-Duluth division mortgage of the net proceeds from the sale of the lands. The amount so redeemed up to March 31, 1909, was $2,701,859.43, leaving still to be redeemed $1,298,140.57. This item appears in the list of assets of the Improvement Company under the title 'Lands in Northern Minnesota,' and the amount of the unredeemed debenture bonds referred to is included in the amount of debenture bonds outstanding."

(Dated) May 5, 1909.

Attached to the foregoing statement was the following:

"STATEMENT OF ASSETS OF THE NORTHWESTERN IMPROVEMENT COMPANY AS SHOWN BY ITS BOOKS MARCH, 31, 1909.

"REAL ESTATE, EXCEPTING COAL PROPERTIES.	BOOK VALUE.
"42,605.05 acres lands in northern Minnesota	$1,312,740.42
"1,519,060.79 acres lands in western North Dakota, and eastern Montana	285,710.28
"99,058 acres lands in western Washington	528,333.23
"320.71 acres in Coos county, Oregon	2,560.00
"Town lots in St. Paul	121,500.30
"Town lots in Minneapolis	131,678.15
"Town lots and water front property at Superior.	240,014.75
"31,214.04 acres on Cuyuna Range, in Crow Wing county, Minn., owned or leased	398,255.80
"Townsite, dwellings and boarding house at Paradise, Mont	75,166.79
"Townsite, dwelling houses and boarding house at Laurel, Mont	67,391.06
"Townsite and dwelling houses at Dilworth, Minn.	23,014.79
"Townsite at Manitoba Junction, Minn.	886.31
"Land for Townsite at Turah, Mont.	9,188.34
"Town lots and unplatted property at Tacoma, Wash.	125,390.66
"Town lots at Portland, Oregon	18,073.94
"Tide lands, Seattle, Wash.	26,231.40
"Water power at Sunset Falls, Wash.	10,082.33
"Water power on Yellowstone river, Mont.	7,225.00
"Warehouse on block 186, Seattle, Wash.	163,597.56
"Dwelling houses at Pasco, Wash.	43,843.15
"Townsite at Gwyther, North Dakota	1,002.50
"Total	$3,591,886.76

"COAL PROPERTIES.

"MINES IN OPERATION.	BOOK VALUE.
"Roslyn and Clealum, Washington	$1,276,248.33
"Ravensdale, Washington	992,410.67
"Melmont, Washington	272,913.40
"Chestnut & Mountainside, Montana	553,097.53
"Red Lodge, Montana	1,342,468.68
"Coal Bunkers, Seattle, Wash.	62,068.10
"Fuel Briquetting Plant, Tacoma, Wash.	29,072.56
"Material and Supplies, coal department	341,869.63
"(Coal Lands.)	
"Bear Creek District, Mont.	103,669.02
"Bull Mountain district, Mont.	251,405.38
"Livingston-Timberline district, Montana	142,141.23
"Lignite district, North Dakota	2,740.44
"Total	$5,370,104.97

"SECURITIES OWNED.

	PAR VALUE.	BOOK VALUE.
"18,496 shares Northern Pacific Ry. Co. stock	$1,849,600.00	$2,633,877.91
"30,000 shares Port Townsend Southern R. R. Co. stock	3,000,000.00)	
Do Do bonds	912,000.00)	350,000.00
"20,000 shares Port Angeles and Peninsular Ry Co., stock	2,000,000.00)	
"40,000 shares Port Angeles and Olympia Ry. Co., stock	4,000,000.00)	35,000.00
"620 shares Minnesota Transfer Ry. Co., stock	62,000.00	62,000.00
"100 shares Northern Express Co., stock	10,000.00	10,000.00
"1,193⅓ shares Consolidated Land Co. common stock	119,366.67	71,580.00

"622 shares Montana Coal & Iron Co., stock	62,200.00	13,000.00
"City of Ashland, Wis., bonds	2,300.00	2,300.00
"Tacoma Hotel Co., 2d mort. bonds	5,000.00	5,000.00
"Total		$3,182,757.91
"Accounts receivable, (less accounts payable		$ 484,805.03
"Cash		642,619.26
"Total		$1,127,424.29

"SUMMARY.

"Real estate, excepting coal properties	$3,591,886.76
"Coal properties	5,370,104.97
"Securities owned	3,182,757.91
"Accounts receivable, (less accounts payable) And cash	1,127,424.29
"Grand Total	$13,272,173.93

"St. Paul, Minn.,
May 4, 1909."

Q. You have given a list of properties of the Northwestern Improvement Company, as shown by its books on March 31, 1909?

A. Yes, sir.

Q. And have, under the head "Book Value," stated certain amounts with reference to each item upon the list?

A. That is correct.

Q. As I understand it, the amounts given as the value of each item do not purport to be the actual value?

A. They show the value of each item listed on this paper as they stand on the books of the Improvement Company on March 31, 1909, and they may represent the present market value or they may not; I don't know.

Q. Well, then, so far as your testimony is concerned, you

do not give the amounts appearing in this list as the actual values of any of the properties mentioned there?

A. I do not claim, in submitting this paper, that any one of these items necessarily represents what you would call the market value, if there were a market for these properties. They represent what the Improvement Company has put into the properties in order to obtain them.

Q. Well, is that what they do represent,—the investment?

A. Yes, sir.

Q. That is, they represent—The book value gives, of the articles returned, their actual present value?

A. Yes, that is correct; that is, the cost to the Improvement Company.

Q. All of the stock of the Northwestern Improvement Company is owned by the Northern Pacific Railway Com- Company, is it not?

A. Yes, sir.

Q. Can you give the date at which the recent dividend declared by the Northwestern Improvement Company was paid to the Northern Pacific Railway Company?

A. I could not without reference to my office; it was last autumn some time.

Q. In the fall of 1908?

A. Yes.

Q. That dividend, in round numbers, amounted to $17,000,000?

A. Yes, sir.

Q. And was, in turn, distributed by the Northern Pacific Railway Company to its stockholders prorata as a dividend?

A. No, sir, the Northwestern Improvement Company paid it direct to the stockholders of the Northern Pacific Railway Company.

Q. It amounted to about 11 per cent upon the stock of the Northern Pacific Railway Company?

A. A trifle over 11 per cent.

The MASTER: Do I understand by that you mean on the stock which the Northern Pacific Railway Company held of the Northwestern Improvement Company, or 11 per cent on the total stock of the Northern Pacific Company?

WITNESS: No, sir, the Northwestern Improvement Company made a cash distribution of its assets to the stockholders of the Northern Pacific Railway Company which amounted to something over $11 per share on the stock of the Northern Pacific Railway Company.

The MASTER: That is the way I understood it but I wanted to be sure.

Q. You said the Northwestern Improvement Company distributed $17,000,000 of its assets; what do you mean by that, Mr. Elliott?

A. Why, it had certain assets in its treasury and decided to make a division of them,—not all of them, it has got some left, as shown on this paper.

Q. Well, it had $17,000,000 of cash in its treasury, did it not?

A. It did at that time.

Q. There was no distribution of any personal property other than cash?

A. That is all.

Q. And that cash had been accumulated in what manner?

A. It had been accumulated during the life of the Northwestern Improvement Company from the sale of lands, from profit on investments, from interest on securities owned and from the sale of coal.

Q. The sale of coal from its mines?

A. Yes.

Q. Could you say what was the aggregate amount received from the operation of its coal mines and included in that distribution?

A. I could not, no.

Q. The first item upon this list is 42,605.05 acres of lands in Northern Minnesota; can you state generally where those lands are situated?

A. Those lands are in northeastern Minnesota, principally, north and east of Duluth; there are a few that are south of Duluth.

Q. Are they situated upon either of the iron ranges?

A. Some of them are in the iron range country, others are farther east, in Cook county.

Q. What portion of the total acreage included in this item is situated upon the iron range?

A. I could not tell without an examination of the maps in detail.

Q. Does that item include any iron lands which have been explored?

A. Yes, sir.

Q. And upon which iron is known to exist?

A. Yes, sir.

Q. In very large quantities?

A. I don't know as to that. Some pieces have been drilled, and the drilling indicates that there is considerable ore; how much will come out of the ground when they come to mine it no one knows.

Q. Have those iron mines been thoroughly explored?

A. No, sir.

Q. Those lands have been held for a considerable period of time?

A. They have been held since I have been with the Company; I do not know how long prior to that time.

Q. And considerable exploration has been made?

A. Well, there has been a great deal. The word "considerable" might be subject to a misunderstanding; we have made some examinations.

Q. Are the lands upon the market?

A. No, sir. I will change that, please. Some of them are on the market; we are selling some of them from time to time; they are cut-over pine lands, a good deal of them, and we sell some of them as we get opportunity.

Q. Are any of the lands on which ore is known to exist upon the market?

A. No, sir.

Q. These drillings that you speak of were by drilling with a diamond drill?

A. Yes, sir.

Q. And complete records are preserved as to the result of the borings, are there not?

A. We have a good many records; I don't know whether we have them all or not. Drilling has been going on for several years.

Q. There would be no difficulty in ascertaining, with some degree of accuracy, the value of those properties, would there, Mr. Elliott?

A. I could not answer that; I am not a skillful enough iron-ore man to tell you.

Q. How long is it since you were first upon the stand in this case?

A. I don't know.

Q. Several months, is it not?

A. I should think it was more than that; six or seven months, isn't it?

Q. I say several months.

A. Yes, several months.

Q. When you were first upon the stand, I requested this information from you, did I not?

A. Yes, sir.

Q. And informed you at that time that it was considered by counsel for the State one of the facts which the Master

ought to be put in possession of—as to what was the reasonable value of the holdings of the Northwestern Improvement Company?

A. Yes, sir, I believe you did.

Q. You have made no attempt to ascertain that, have you?

A. I have done nothing but prepare a statement of this character.

Q. Is it not true that you have deliberately avoided informing yourself upon the question so that you would not be able to testify as to those values?

A. No, sir.

Q. You haven't ascertained the facts, however?

A. No, I have not attempted to do anything more than I was asked to do, to prepare various statements, which I have done.

Q. I asked you to prepare a statement as to values, did I not?

A. If you did, I misunderstood it. What I understood—

Mr. How: So did I. I don't think there is anything of that kind appears in the record.

Attorney General YOUNG: Why, we spoke about that twenty times, Mr. How.

Mr. How: I told you every time we could not prepare one in regard to the values, not in six months.

Mr. O'BRIEN: Well, you have had more than six months.

Attorney General YOUNG: He says he hasn't tried; how do you know he couldn't?

Mr. How: Another thing I might as well state. I don't want to raise this question while Mr. Elliott is on the stand—he is willing to testify as to everything he knows anything about—but if counsel are going into the values of the Northwestern Improvement Company to the extent of any lengthy examination, I shall encourage the witness not to answer, on the ground that it is impertinent and has nothing to do with

the lawsuit. That question will have to be tried out before the witness will answer with my consent, Mr. Young.

The MASTER: Didn't you put in testimony of that character?

Mr. How: No, sir.

Mr. O'BRIEN: Not since the counsel have revised their judgment as to the law of the case.

Mr. How: We haven't revised our judgment as to the law of the case at all.

The MASTER: I thought Mr. Cooper testified—

Mr. How: Mr. Cooper testified with regard to the value of coal lands which are used in the operation of the Northern Pacific System. These lands are not, they haven't anything to do with the operation, but I don't care to argue the point. I am ready to argue it at any time but shall encourage the witness not to answer if they go into the value of ore lands or anything else.

Attorney General YOUNG: Your position, then, is that you don't intend to permit any testimony on this question?

Mr. How: It won't be given with my consent, no, sir.

Attorney General YOUNG: Well, I assume,—

Mr. How: I am willing Mr. Elliott shall testify as far as he knows. I think I am advised as to the extent of his knowledge, and have told counsel, several times, that he was not competent to testify with regard to values.

Mr. O'BRIEN: Well, now, of course, there is no necessity for any discussion by any of us at this time and there is no necessity for any characterization of the matter. We are here at the suit of a stockholder of the Northern Pacific Road, in which the bill of complaint alleges that there has been no collusion between the stockholder and the officers of the Road for the purpose of bringing the suit, and the State of Minnesota is sued and enjoined. It is conceded that of the properties held by the Northern Pacific road and represented by the capital stock of that road as stated in the statement which Mr.

Elliott has presented there in this list of property. We claim that it is important to know what the capital stock of the Northern Pacific represents, and we claim that the Court and the Master are entitled to a reasonable statement of these facts and we have been trying now for a year to get a statement of that sort without going into great detail and spending too much time. If the President of the Railroad Company and of the Northwestern Improvement Company, under encouragement of the attorney for the stockholder, refuses to give that information, it ought to be sufficient to end this case.

Mr. Hoar: Well, I will say now that if it is sufficient to end the case we will give it but we won't give it unless we have to. Mr. Elliott will testify as to everything he knows,—you have got him on the stand. Now, they can call other witnesses if they want to but if they take my advice they won't answer questions that go into the value of properties that haven't anything to do with the question of this road or how much the road ought to receive for transportation of freight or passengers.

Attorney General Forster: Well, you don't claim the capital paid in by the Northwestern Improvement Company is engaged in transportation, do you?

Mr. Hoar: I do not make any claim now at all; my position is as I have stated it.

Attorney General Forster: Your position is to cover up the facts.

Q. Mr. Elliott, I am very sorry to have any misunderstanding with regard to this matter, and I think in one of your answers you said that you did not understand that you were asked to give your judgment as to the value of these properties; is that correct?

A. That is my recollection, yes, sir, that I was to give a statement of the—

Q. Do you desire time and opportunity to inform yourself

as to the value of these properties and complete the statement in that respect?

A. I want to make a general statement there, Mr. O'Brien, as to values. Now, it is practically impossible, in my judgment, in any reasonable time, to determine, for example, the value of any of our coal properties. We have a very large amount of land that is thought to have coal underneath it. The land in Washington is in the mountains. It is covered very heavily by the detritus of centuries, and the diamond drilling there is excessively slow; we have been running a diamond drill in that country ever since I have been with the Company, (that is five years) and we have obtained very little accurate information by the work. We have certain mines that are in operation and today they are producing large quantities of coal and in that way they are of great value to the Railway Company by enabling it to have a supply of coal to run its business. How long that supply will last, I can't say, I don't know anyone that can. At one time, for my own purposes, I thought of making up the information, exactly such as you asked for, and I found it was practically impossible unless we spent a good many years doing it and when we got through we were doubtful whether the information would be right or not. Some of these coal properties are in the Cascade mountains, which, as you know, is a volcanic range; one in particular, that is carried on these books at $272,000, it is a question whether it is worth a cent; we hope it is, but it is in a very bad situation. We have got a little coal in sight today and are getting out two or three hundred tons a day,—it may disappear any minute. Another one of these coal properties, at Chestnut, Montana, stands on our books at $553,000,—we are getting ready this year to wipe the whole score off to profit and loss and abandon the mine. The coal is there but it is very much broken and we don't know how long it would last if we go on mining; we have been drifting a rock channel for two

years in the hope of finding some coal and having a working mine. The local men are, of course, enthusiastic, they think they will find coal; but the Amalgamated Copper Company had mine after mine in that same district, have sunk several million dollars and have abandoned the mines. Now, you take our Red Lodge mine which today is a source of considerable income to the Company, producing coal that we use in Montana,—since I have been here we have had three fires in that mine, which we fortunately controlled, but they might have gutted the entire mines. The Ravensdale mine, in Washington, we *think* there is a large amount of coal there, but we are today in what is called a "want"; that is to say, we have been mining along and suddenly come to a place in the mine where at some time in the dim past the action of the water or some cause washed all the coal away, and there we are with a fine set of top works and a fine development and we suddenly come to a place in the mine where there is what the geologists call a want—it is not a fault, it is a want.

Q. I suppose, Mr. Elliott, every ordinary intelligent person understands that there are faults, slips and slides in mines and that mines run out and that prospects don't all develop?

A. Yes.

Q. I don't think your statement is responsive to my question, I don't know why you should confine yourself to coal properties of which I have not spoken at all. What I desire to ask you is this, whether or not you will inform youself so as to be able to give to the Court your honest judgment as to the approximate value of the total assets of the Northwestern Improvement Company.

A. Well, Mr. O'Brien, I have been trying to respond to your question by showing to you one of the difficulties that confronts the officers of the Northwestern Improvement Company in trying to arrive at any value that means anything in that part of their property. I am perfectly willing to begin on the

previous page and discuss the items there. I was trying to answer your question. Some of those items it is obvious we can go and get a reasonable market value for; dwelling houses at Pasco, Washington, for example, we can have a real estate man go there and examine them and put a price on them.

Q. Have you at this time no judgment which you will be willing to give as the minimum and maximum values of the entire assets of the company?

A. I would not be willing, Mr. O'Brien, as President of the Northern Pacific and as President of the Northwestern Improvement Company, to give sworn testimony that the assets of the Northwestern Improvement Company were worth a minimum and a maximum, because I think it would be unfair to the stockholders of the Company; they would say, "Here is the President of this Railway gives sworn testimony that this property is worth so much." They would base their calculations on it in either buying or selling the securities, and I don't know what they are worth. We are all hopeful that they are going to be worth a great deal, and they may disappear.

Q. Why doesn't that same argument apply to the value of the railroad properties proper?

A. We have gone to work with the railroad properties proper and have made values of the real estate and the rails.

Q. Then, it is not a question of the impropriety of making a statement as to value?

A. I said I have had no information.

Q. You would not be willing to give a statement?

A. No, not on what facts I have.

Q. Because you don't know?

A. I don't know, no, sir.

Attorney General YOUNG: Who does know?

WITNESS: Nobody knows. You can conjecture, you can guess. One coal man will go out and he will say, "We think

you have got so much coal;" another coal man will go out and say, "I don't think you have." Only recently we have had two expert mining men examine a certain section of the country where we were thinking of building a railroad; that country was supposed to have valuable mines; one expert said there was no possibility of any commercial development in that section; another said there was; and there you are.

By Attorney General YOUNG:

Q. That is the only information you could get, I suppose?

A. I have no means of telling how much coal there is under the ground or how much ore there is under the ground.

Q. According to your theory, then, there is no way of getting any definite information as to the value of the mining property?

A. I think it is very difficult to get.

Q. Well, it isn't any more difficult in the case of your mines than in the case of others?

A. Well, it is quite difficult in the case of others, judging from my own experience. I have been unfortunate enough to buy stock in properties that were thought to have large value and I never got a cent. It is a very doubtful business.

By Mr. O'BRIEN:

Q. That question as to the value of the mining property doesn't apply as much to the iron ore properties in Minnesota as it does to the mines containing precious minerals, does it, Mr. Elliott?

A. Well, I don't know as to that, Mr. O'Brien. As I stated here in my testimony, I don't claim to be an expert iron-ore man; I know we have been drilling and we have made estimates that there might be so many tons of iron ore in the ground but no one knows whether you will get them out until you actually mine them.

Q. Well, you know it is true that the iron ore lies in great

masses and is taken out from open pits, very often, with the steam-shovel, and that, on the contrary, the precious metals lie in narrow veins and frequently pinch out and disappear? It is altogether different, is it not?

A. I know some of the iron ore lands are that way, because I have been in the mines, as probably you have; other iron ore is deep down under the ground, it has got to be mined with a shaft and entries.

Q. You don't think there would be any practical difficulty in arriving at a reasonable estimate as to the value of the iron ore properties held by the Northwestern Improvement Company in Minnesota which have been explored?

A. I think that it would be possible to get an estimate of what some mining expert thinks is in the ground in a piece of land that has been drilled. Now, you can take that as a fact or not. I shouldn't want to borrow money or loan money to a very large extent on that particular statement.

Q. Are any of those mines in operation?

A. No, sir.

Q. Assuming that it is pertinent to this inquiry to ascertain and to know the value of the properties of the Northwestern Improvement Company—the stock of the Northern Pacific Railway Company representing those properties—but those properties not being used for the operation of the road and not being in any manner connected with the question of operating expenses of the road, do you see any substantial difference between arriving at the value of the properties owned by the Northwestern Improvement Company and the properties held by the Northern Pacific Railway Company for the operation of its road?

A. Well, if I understand the question, it is whether we could go through the same process in arriving at values of this property that we have been through in arriving at the values of the property used by the Northern Pacific in the

operation of its road; am I correct in that?

Q. Yes.

A. I think that could be done, but I don't think you could do it as accurately in the case of the Northwestern Improvement Company as you do with the railroad, because the railroad property is all above ground and tangible and can be matched up with other property adjacent thereto.

Q. It is a question of the degree of accuracy and the amount of work required, is it not, Mr. Elliott?

A. Yes, sir.

Q. Under any circumstances, you would consider the properties of the Northwestern Improvement Company in the aggregate as of less value than the property of the Northern Pacific Railway Company which has been described here as an "operating tool?"

A. I don't know that I quite understand the question.

Q. What I mean is that the assets of the Northwestern Improvement Company, under any circumstances that can now be fairly considered, are of less value in the aggregate than are the holdings of the Northern Pacific Railway Company used for railroad purposes.

A. Why, yes, if I understand the question right, the Northern Pacific Railway Company has 6,000 miles of railroad, substantially; in my judgment, that is worth a great deal more than the assets of the Northwestern Improvement Company.

Q. The research and work necessary to arrive at a fair estimate of the value of the properties of the Northwestern Improvement Company would be, therefore, a great deal less than the amount required to arrive at a fair judgment as to the value of the Northern Pacific properties?

A. No, sir.

Q. That would not be true?

A. It would not be less, for the reason, as I say, to get at anything that would be at all reasonable about our coal prop-

erties we would have to spend years in drilling, and it is very slow,—very slow.

Q. If the inquiry were confined to the value of the properties containing coal and iron which had been explored, the problem would be greatly simplified, would it not?

A. It would be somewhat simplified, yes.

Q. It has never been suggested that you should put in iron drills on any special property to arrive at the value for the purpose of testifying in this case?

A. No, sir.

Q. Then the reason you are not prepared to make a statement as to the assets of the Northwestern Improvement Company, your judgment as to their value, is not that you could not have ascertained and come to a conclusion as to the present apparent value of those assets, but it is because you have made no attempt to do so?

A. Well, that is correct in a way. I could not today give what I would consider, under oath, a fair statement of the values of these properties. I could not, within the time that has elapsed since you state you asked me first about them, have started any machinery at work that would have produced information that would have justified me in my mind in making a statement about the values of these assets.

Q. You mean by "machinery" actual operations upon the ground, such as drilling?

A. Well, drilling and investigation by various experts and so on.

Q. You could have had an examination made of the actual reports of drillings of the ore lands, and had that matter—

A. Yes, we could have done that.

Q. Is there anybody, any officer of the Northwestern Improvement Company, who is in a position to give this information?

A. I don't know. This Cuyuna Range is some iron ore

property that we have recently acquired for the construction of our main line, and we have had some drilling done on that. Mr. Cooper, the Land Commissioner of the Company, has the details of those borings. Some of them show evidence of merchantable iron, some of them do not. And I think he has in his possession the examinations made by Mr. Storrs of some of our iron ore lands two or three or four years ago. Mr. Storrs is not now connected with the Company. There is no officer of the Improvement Company that I know of that has any accurate information as to the quantity of the iron ore that may or may not be in the ground, even in the land where there has been drilling. We could look up some of these old records,—that is about all.

Q. Well, as a result of all this, will you say whether or not you will furnish to the Court a statement giving what you consider a fair and reasonable estimate of the value of the assets of the Northwestern Improvement Company?

A. Why, Mr. O'Brien, it is physically impossible for me to do so. I would not be willing to come in here and submit a statement that would simply be a guess on my part; I don't feel justified in putting myself in that position.

Q. Well, would it be more of a guess than the amount of interest which would be required or incurred for the use of capital in the rebuilding of the Northern Pacific road?

A. I think it would, yes, sir.

Q. Or of the contingencies that would occur during the imaginary building of that road?

A. A good deal more of a guess, from my present information.

Q. Or of the additional value which the road has acquired from use and solidification of roadbed and for good-will of the road?

A. Very much more of a guess, in my judgment. All those items that you speak of are susceptible to the test of human

experience; and what is underneath the Cascade mountains you can't judge by human experience, you have simply got to go and bore holes and find out.

Q. Well, it seems to me, Mr. Elliott, that the properties of the Northwestern Improvement Company are divisible into different classes. So far as your mining properties are concerned, you have the explored properties and the unexplored properties; it might be the merest guess to say what is the value of an unexplored property, while at the same time it would be entirely fair and practicable to give the reasonable value of the explored properties. In the same way you have a great many other items here that are in a different class. I call your attention, for instance, to the 38,000 shares of Port Townsend Southern Railroad stock of the par value of $3,000,000, and the 912,000 bonds of that company, of which you give here the book value of $350,000. Now, is that a fair statement of the present value of those securities?

A. I am inclined to think it is too high.

Q. You think it is too high?

A. You must remember you have asked me a question as to all of the assets of the Northwestern Improvement Company. I can take individual cases here and probably within two or three months I could get at a value, just as we did with the railroad, but it would take several years to make even a guess on some of the property.

Q. You are now again referring to properties in which explorations would be necessary?

A. Yes, sir.

Q. Eliminating all properties of that class, it would be a comparatively simple matter to arrive at a conclusion as to the reasonable present value of the properties of the Northwestern Improvement Company?

A. Yes, sir.

Q. How long would it take you to make a statement of that sort?

A. Well, on page 1, or on the first page where the assets are listed here, I should think it would take two years to value the lands in western North Dakota and eastern Montana. The balance of the property on that page, excluding the mining property, we could get at a value within a few months.

Q. You mean excluding the first item?

A. Excluding the first item and the Cuyuna Range item.

Q. That practically eliminates all of the valuable property on that page, comparatively speaking?

A. I don't know whether it does or not. We think the property at Tacoma is of value, that the property at Seattle is of value.

Mr. O'BRIEN: Now, may it please the Court, we don't desire to proceed any further with this line of cross-examination. We again assert that, in our judgment, it is a part of the Complainant's case and that the burden is upon the Complainant to prove the value of the holdings of the Northern Pacific Railway Company, the holdings which are not used for the purpose of the operation of the railroad as well as those which are actually used in the operation of the road. It has been shown in this case that the actual investment in the capital stock of the Northern Pacific is but a small percentage of the par value of that stock and it has been shown by the statement of the officers of the Road themseves. Of course, it will be claimed in this case (whether correctly claimed or not) that, in considering the value of the property used and devoted to the public service that value should not be fixed below the par value of the capital stock because (it will be said) it has been shown that the actual present value of the physical properties equals or exceeds the total capitalization notwithstanding the fact that the original investment was much below. Now, we claim that it follows, as a matter of course, if that

position is correct, that the capitalization represents all of the holdings of the Northern Pacific Railway Company, the properties held in the name of the Northwestern Improvement Company as well as the properties actually used in the operation of the road, and it is one of the important facts to be proved by the Complainant in this case as to what those values are, and without further arguing with the witness we reiterate our position upon that point and insist that that proof be presented.

The MASTER: Well, if it isn't here, why it isn't here, and I don't suppose it is for the Master to rule now—

Mr. O'BRIEN: No.

Attorney General YOUNG: That is a statement of our position.

The MASTER: —on the proposition made. But, as I understand, the testimony is not here as yet and it is not proposed to bring it here. Of course, the parties must take the responsibility of not getting it here if it is material.

Mr. HOW: It looks as though we should have to do that. I might ask Mr. Elliott one question.

By Mr. HOW:

Q. Mr. Elliott, what proportion, if any, of the assets of the Northwestern Improvement Company has, so far as you are advised, been acquired by the Northwestern Improvement Company with money taken from the earnings of the Northern Pacific Railway Company from its operation?

A. I never caused a statement to be prepared that would give accurate information as to that, but my impression is that practically none of the assets of the Northwestern Improvement Company have been so acquired.

By Attorney General YOUNG:

Q. How were they acquired, Mr. Elliott?

A. They have been acquired by the issue of securities and

by the accumulations of the Company itself through its operations.

Q. Well, hasn't the Northern Pacific Railway Company bought securities?

A. Yes, sir.

Q. Where did they get the money to buy them with if not out of earnings?

A. It got them from its own sources.

Q. Its treasury?

A. Its treasury.

Recess till 2 P. M.

AFTERNOON SESSION.

CONWAY W. HILLMAN,

recalled for further cross-examination, testified:

By Mr. BUTLER:

Q. On yesterday I asked you to find out if you could do so readily, what percentage of the operating expenses attributable to Minnesota, as shown on that Table No. 1, was directly charged to Minnesota and what percentage arbitrarily divided on some of the various bases employed by the Company.

A. I haven't got that statement as yet. I have the men in the office looking at the data to see if it was taken off in that way, and I will have to ask that you let that go for the present.

Q. Well, it is a mere matter of adding the items that are divided directly, is it not, and those that are divided on some of these bases and taking the percentage of each of the totals?

A. There would be some items where there would be a state allocation and a state division, and therefore I am looking it up. I think that their data is full enough for me to get it for you.

Q. Can you yet give me the intrastate freight revenue for

April or October, with or without the error that has been referred to so much?

A. No, sir; I find that I haven't worked that matter out as yet. I could only give you the item of the Northern Pacific straight way-billing as reported from them.

Q. That would not include all the intrastate earnings?

A. No, sir.

Q. Well, we will defer that until you can. You were to indicate to us what the net profit was in your judgment from miscellaneous passenger earnings and miscellaneous freight earnings.

A. I haven't got that statement quite finished yet, either, sir; I bit off more than I could handle on that basis.

Q. Then we might reserve those questions until you are through. Now, that the Master may have before him the forms of the statistical information or accounts from which you made up Table No. 5, can you now produce a form of the abstracts and way-bills and other papers that you examined in making that?

A. Yes, sir; I had a form as blue-printed, to which I suppose you refer; it is a specimen sheet only, a blue-print of one of the sheets.

Q. Let us have that, then.

Witness produces statement.

Q. This blue-print that you hand us is a blue-print of a table that you made up in the process of your work?

A. That is a specimen sheet only, showing the method of obtaining the weight and pound loads, through and local ton-mileage. These sheets were made up from the agents' records which have been returned to the Northern Pacific and are now in their possession.

Q. You haven't the form of them?

A. No, sir, I didn't keep any form.

Q. They were called abstracts?

A. Agents' shipments of the freight forwarded and freight received.

Q. And it may be made just as clear by stating on the record what facts appeared on such shipments. You have in mind what facts appeared on the shipment?

A. It would show the station of freight forwarded, which we can illustrate by the first item on this sheet—Custer City to St. Paul, the weight in general,—and that would be shown in such detail that you could determine the amount of the total weight which was carried in carload lots.

Q. Would it show the carloads separately?

A. It does, yes, sir.

Q. And each l. c. l. shipment separately?

A. No, sir, the l. c. l's in total per days, leaving a total at the end of the month; the next statement would be from Custer City to Stillwater. The next shipment would be from Custer City to Rush City.

Q. They would all be alike, would they?

A. They would all be alike, yes, sir.

Q. As regards different parts of the road?

A. Yes, sir.

Q. And then, as I understand it, they would show where the shipments originated and where they terminated?

A. Yes, sir.

Q. The weight of each shipment?

A. The weight of each day's shipment.

Q. The weight of the car?

A. The carload, yes, sir.

Q. Then the aggregate weight in all the cars?

A. In carload lots, yes, sir.

Q. But not the loading of any car, or did it contain the loading of any car? I didn't mean to imply one way or the other.

A. It would not contain any car number or indication of

the car for a less than carload shipment.

Q. Would it indicate the loading of any car in weight?

A. Only in carloads. In carloads it would.

Q. The loading of each car?

A. Yes, sir.

Q. And, as I understand it, as to the carload business, the loading of each car is shown on the abstract?

A. Yes, sir, it would be shown on the abstract.

Q. The routing of travel?

A. No, sir, they have no routing shown on the abstract.

Q. The train?

A. No, sir.

Q. The revenue?

A. Yes, sir, the revenue is shown.

Q. The kind of commodity?

A. No, sir, not as a general thing; it is sometimes mentioned.

Q. The rate?

A. No, sir.

Q. Does it show anything else with respect to the carload business?

A. It might possibly show the rate upon a carload lot. I paid no attention to it if it did.

Q. Show whether it was state or interstate business in fact?

A. No, sir, it would only show from the destination of the freight as way-billed.

Q. Well, that wouldn't be any guide to whether it was state or interstate business, would it?

A. Not necessarily. It would be, where it passed out of the state, where the destination was out of the state on an N. P. way-bill.

Q. But if it ended in the state, it wouldn't be?

A. It would not be shown whether it had an origin out of

the state or not; we would only know that it was passing from and to these points on a Northern Pacific intrastate waybill.

Q. As respects the carload business shown on the agents' abstracts, have you indicated all of the information that is disclosed on such abstracts?

A. No, I haven't indicated the number of cars, nor have I indicated any rate where it was so mentioned, nor have I anywhere indicated the money received.

Q. I mean in your answers to me have you designated all of the items of information. I am not asking for any particular item.

A. As I said, carload business, the station abstracts show—

Q. Do I make myself perfectly clear to you?

A. I should say you had, yes.

Q. Now, as respects the less-than-carload-lot business, what are the items of information disclosed by the station abstracts?

A. The pounds.

Q. Is that all?

A. I think they have the pounds and the money. I paid no attention to that, and I couldn't recollect now, off-hand, whether they had the money on or not. No attention was paid to it in less than carload lots; it was the pounds only.

Q. Didn't it show the origination or destination?

A. No more than the statement itself did, which was from such a point to the destination marked.

Q. From the station abstracts could you tell where each shipment originated and where it went and what it was and what it weighed and what was paid for it?

A. I could tell from the station abstracts the origin of the shipment, as far as the Northern Pacific Railway Company was concerned in it, also its destination as far as the Northern Pacific Railway Company was concerned in it; I could tell

the weight of the total shipments for the period for which the abstract was made, which is generally for one month.

Q. Could you tell what the shipment was?

A. No, sir, I couldn't tell what the shipment was.

Q. Or the class to which is belonged?

A. No, sir, that was not indicated.

Q Or the amount of money paid?

A. I really do not remember whether the amount of money was entered or not. I think it was, but no attention was paid to it on those abstracts.

Q. Now, was there any other item of information shown on the abstracts of the station agents which you used in making up your Table 5 which you have not mentioned in answer to my questions this afternoon?

A. Not that I recollect of, sir.

Q. So then, you have stated fully what the abstracts showed?

A. Yes, sir.

Q. Now, what other things did you examine besides the abstracts in order to get your data for Table 5?

A. What might be called the interline shipments.

Q. Well, I didn't mean what shipments you examined, I meant what papers, what class of papers.

A. Well, they are the reports rendered to the Northern Pacific road for the interline business, overhead interline.

Q. Rendered to the Northern Pacific by whom?

A. By the agent who forwarded and by the receiving road for the received.

Q. What are those reports called?

A. I don't know.

Q. What would be a good name for them?

A. "Agent's interline forwarded report," "Agent's interline received report."

Q. That means the reports of the agents of the Northern

Pacific to the Company?

A. Yes, sir.

Q. Showing what interline business was forwarded from the station or reporting agent?

A. Yes, sir.

Q. I think you did not mention those in your direct examination; if you did, it has escaped my memory. You haven't a form of that here?

A. No, sir, I kept no forms of those.

Q. Well, what items of information did such reports disclose as respects the interline shipment?

A. They would disclose practically the same as this.

Q. The same as the regular agents' abstracts, on separate billing?

A. Yes, sir, the difference is principally in—

Q. So then, agents' abstracts are of two kinds, they have one for the straight billing and one for the interline billing, is that it?

A. Yes, sir.

Q. From these abstracts could you tell how much of any particular commodity moved between particular points in any particular period?

A. No, sir. I think they are practically in the same form as the other abstracts.

Q. And you were not able to determine the character of the business?

A. I didn't attempt to.

Q. As to whether state or interstate?

A. I didn't attempt to at all. And no complete analysis could be made from the agents' abstracts in that regard.

Q. Well, was there anything to indicate except destination?

A. Now and then, yes, sir. Now and then the loading was mentioned.

Q. The place of loading?

A. The place of loading? No, sir,—the loading.

Q. I meant as to whether it was state or interstate business.

A. No, sir; there was no notation. It might have been casually, but none that we paid any attention to.

Q. Or the weight of each carload?

A. Yes, sir, the carloads were mentioned.

Q. The weight of each carload?

A. The weight of the carloads was mentioned, yes, sir.

Q. So you could get the number of carloads and weight of each car?

A. Yes, sir.

Q. Now, as to the l. c. l. business, what did these agents' forwarded reports of interline business show?

A They showed in the same method.

Q. Show any routing?

A. No, sir.

Q. Or train service?

A. None.

Q. Or characterization as to state or interstate?

A. No, sir.

Q. Or the kind of commodity?

A. No, sir.

Q. Could you ascertain from those whether the Company freight was included,—from those or the abstracts?

A. Yes, sir, I think Company freight was mentioned on those, if I recollect correctly.

Q. And also on the agents' abstracts on the straight waybilling?

A. Yes, sir.

Q. And did you, in making the examination of the agents' abstracts and the agents' forwarded reports of interline business, separate the Company freight from the other?

A. If it was mentioned, as I think it was, it was ignored,

it was not taken into account at all.

Q. Were the totals kept?

A. No, sir.

Q. The revenue was shown of the revenue freight; that is, the amount that each shipment paid?

A. By me, sir?

Q. No, by the things you examined.

A. I think they were on there, yes, sir; or it might have been in the total at the end, but it was not examined by me nor any record kept of it—

Q. No attention paid to that?

A. —and therefore it passed out, so I would be a little hazy on the subject of whether it was there or not.

Q. Now, we have spoken of two classes of papers that you examined in your work of preparing the figures on Table No. 5. What others were there, if any?

A. Then comes what we call the overhead.

Q. Were they on separate reports?

A. They are, of course, reports that come from the main office, they being started from another road and the destination on another road.

Q. What are those papers called?

A. Well, they would be the report from the connecting lines and they would be called, probably, "the abstract of overhead" or of "other business" or of "bridge work"; I can't give the exact title.

Q. They are not known by any regular designation in railroad accounting or railroad circles?

A. They have a different title on almost every road; generally known, if you speak of them, as "the overhead reports" or of "the bridge work."

Q. How many of them were there?

A. I don't know, sir.

Q. You said in your direct examination there were about

10,000 agents' abstracts that you examined?

A. Yes, sir.

Q. Did that include the interline forwarded reports?

A. No, sir.

Q. How many were there of them?

A. I couldn't say.

Q. About how many?

A. I should judge there would be in the neighborhood of 1,000.

Q. How many of these overhead reports?

A. That is what I was speaking of.

Q. Then I misspoke myself or you misunderstood me. I meant how many of the interline forwarded reports.

A. Oh, they were included in the 10,000 that we examined.

Q. What did these overhead reports (we will call them, to avoid misunderstanding,) show, as respects carload business and as respects less than carload business?

A. They would show the less than carloads; the total amount of freight collected; the amount of freight—

Q. Well, collected where?

A. I mean the total amount of freight charged, and then they would show the amount of the Northern Pacific proportion of that freight.

Q. The amount of revenue charged for the whole amount is what you mean by "the total amount of freight"?

A. Yes, sir.

Q. What else would they show?

A. And they would show the rates and the division of rates.

Q. What else,—anything?

A. It would of course indicate their origin, where they came from and where they were going to and whether they were state or interstate.

Q. So then, of all the papers that you have mentioned

so far, the chief papers that indicated anything as to whether the business referred to thereon was state or interstate are the overhead reports; am I right?

A. No, sir. As I stated before, that the destination—

Q. Well, I know, subject to the exception that if it originated in the state and went out you would know, but that would not make any indication of the volume—

A. None.

Q. —of the state or interstate?

A. None at all.

Q. But the overhead reports did, you say?

A. Yes, sir, they would indicate that.

Q. Did it show the number of cars, the loading of each car, the kind or quantity of commodity in each car?

A. That I do not know.

Q. You don't remember that at all?

A. Most of this work was done under my direction with specific instructions which should be taken from the reports themselves.

Q. What was taken from those reports? Any carloading taken from the reports?

A. Yes, sir, the amount of carloads.

Q. The average loading of cars?

A. No, sir.

Q. What else was taken from them?

A. The tons.

Q. The number of tons moved?

A. The tons, the ton-miles, and whether less than carload, and carload, and inter or intra.

Q. How much intrastate business was there in the month of April reported on the overhead reports and what was the revenue derived by the Company from it?

A. 5,171,000 ton-miles, practically.

Q. Give me the exact figure, for the purpose of compari-

son; it will identify itself more readily.

A. 5,171,455 ton-miles.

Q. Of intrastate?

A. Of both.

Q. That is total?

A. Total.

Q. Carload and less than carload?

A. Yes, sir.

Q. Now, how much carload and less than carload, divided between state and interstate?

A. I haven't got that summary here.

Q. Will you give us that to-morrow?

A. I will try to find that working-paper and give it to you.

Q. You say that showed whether the business was state or interstate business, these overhead reports did?

A. Yes, sir.

Q. Telling where it originated?

A. The origin and destination, I judge, sir.

Q. How is that?

A. I should say the origin and destination would show that.

Q. Well, did these overhead reports show that?

A. They mention it, yes, sir.

Q. Suppose there was a carload of hay loaded at Fort Dodge, in Iowa, and shipped up to Winona, and then billed from Winona to the iron range, we will say to Hibbing, using the Northern Pacific as a bridge, that would be a case of an overhead shipment, wouldn't it?

A. How?

Q. Using the Northern Pacific from the Twin Cities to Duluth as a bridge.

A. Billed from—?

Q. Fort Dodge to Winona, then rebilled (as they do out

here at the Minnesota Transfer) *via* the St. Paul, the Northern Pacific and Missabe & Northern to the iron range; would the overhead reports to the Northern Pacific show that came from Fort Dodge or show that it came from Winona?

A. They would show that that came from Winona.

Q. So, in such a case as I mention, the originating point would not be shown, and the first point that would be shown would be the Minnesota point, and if it ended in Minnesota, your examination would treat all such as intrastate business?

A. Yes, sir.

Q. You know, do you not, that there is a good deal of business bridged over the Northern Pacific to the iron range district in that way?

A. I don't know.

Q. Made no examination to ascertain that at all?

A. As examinations were made of these records anything of that character, as to the keeping track of the routing of freight, anything that I did not consider germane to the question in hand, would be dismissed as soon as it passed me.

Q. Well, was the question of the volume of the intrastate business in Minnesota germane to the question in hand?

A. Yes, sir.

Q. Then if you followed these abstracts ("overhead reports," as we have called them) they would not be a safe guide in the kind of shipments that I illustrated by the Fort Dodge example?

A. No, sir.

Q. To that extent your deductions would be wrong?

A. To that extent my deductions would be wrong; and it wasn't my intention to proceed back of the billing reported on those sheets.

Q. Well, you did want to get at the true intrastate business?

A. The true intrastate business.

Q. But if there were intrastate business of that kind you didn't discover it and your examination was faulty to that extent?

A. No, sir, I considered that as intrastate business.

Q. Well, it would not be, would it, any more than shipments from Chicago to the Minnesota Transfer and billed locally on the Northern Pacific would be?

A. There is, I said in my testimony before, a decision of I believe the supreme court wherein they make that distinction. For my purposes, however, I have treated all such shipments as intrastate.

Q. Yes.

A. And it is just in those points (in the points I have mentioned and illustrating in this) that the difference between Mr. Johnson's 12.33 per cent and my 14.83 per cent arose from my methods of computing.

The MASTER: That is, in getting at the expense, as I understand it, on your theory it was handled as intrastate business and therefore you so considered it?

WITNESS: Yes, sir. And after once having determined the operating percentage of intrastate business, the volume of that business could therefore be varied without affecting the operative percentage of the intrastate business.

Q. That is, assuming, of course,—

A. Yes, sir.

Q. —that the same percentage of interstate business is included in each particular commodity in quantity, and that the same percentage of ton-miles and of revenue is yielded all the time, isn't it?

A. Yes, sir.

The MASTER: I understand it is an assumption?

WITNESS: Yes, sir.

Q. In passing you speak of 14.83 per cent against Mr. Johnson's 12.33 per cent; you examined April and October,

1907, and he examined October, 1905, and April, 1906?

A. Yes, sir.

Q. His 12.33 related to the two months he examined and your 14.83 relates to the two months you examined?

A. Yes, sir.

Q. And that is not the percentage of error, is it?

A. You mean the difference between those?

Q. No, I don't mean the difference between them, I mean the 14.83—what is that the percentage of?

A. The 14.83 is the percentage of the total business carried as intrastate.

Q. How much error did you eliminate in your work? How much was it before you eliminated any error?—that is a good way to get at it, perhaps.

A. Slightly in excess of 27 per cent instead of 14.83.

Q. So then you eliminated about as much as you retained. Give me the percentage each to the total.

A. According to that, I eliminated about 12.3 per cent.

Q. No, I mean of the interstate reported, not of the total in the state. Of the interstate reported by the Northern Pacific, call that 100 per cent, and tell me how much you retained and how much you eliminated.

A. About 54.6 per cent.

Q. Retained or eliminated?

A. Retained.

Q. 54.4 retained?

A. 45.4 eliminated.

Q. That still left some intrastate in, according to your idea?

A. Yes, sir.

Q. Which you think could properly be left in for the reasons you have stated?

A. Yes, sir.

Q. Now, couldn't it all be left in for the same reason?

A. No, sir.

Q. Why?

A. Not from my method of handling it it could not. I could have handled it with it all in, had I so determined.

Q. So it was unnecessary to your assumption that that interstate business which was erroneously included as state business was of the same kind, moved the same way and upon the same rates, and the same distance,—if that assumption was good as to all of the error, there was no necessity to get at the amount of the error at all, was there?

A. If you are referring when you speak of that to the original 27.14 per cent, there was a very decided reason that it should be eliminated, because the haul of the freight was the criterion upon which it was classed as interstate or intrastate and on the amount which I eliminated from the 27.14 per cent the rate was generally on a proportion of a through rate. It was on interstate billing, and therefore moving at interstate rates, and at a Northern Pacific proportion of an interstate rate, it would affect very materially the computation which I wished to make of the amount of freight moving within the state on intrastate conditions, both as to the way-billing and as to the movement.

Q. Did you eliminate any covering the Northern Pacific straight way-billing?

A. I did not, sir.

Q. None at all?

A. I did not. I classed it then on these sheets as on this specimen sheet marked "I," which means an interstate shipment as shown by the destination.

Q. You assumed that all Northern Pacific straight way-billing improperly included as state business in the reports of the Northern Pacific was, on the average, exactly the same kind of stuff as to classes, moved on the same rates, same

trains and same distance and same unloading as the interstate business?

A. Of necessity I was compelled to treat it in that manner.

Q. Is there any more reason for assuming the same distance of haul of the interstate business moving on straight way-billing than there is for the interstate business moving on the interline billing which you eliminated?

A. You mean which I eliminated from the 37.11 per cent?

Q. Yes.

A. I make no such assumption, sir.

Q. No, but you did assume that all that moved—all interstate business moving on straight way-billing—moved the same distance, at the same rate and was the same kind of commodities as the real interstate business?

A. Yes, sir; that is, we assumed that the entire 11.52 per cent shown by us was a homogeneous entity, and that when we assumed the reduction shown by Mr. Johnson's figures to 12.33 per cent we reduced it homogeneously.

Q. Now, is there any better reason for assuming that than to assume that that which you eliminated moved on the average the same distance and was the same kind of stuff?

A. Very decidedly, sir.

Q. What?

A. For the reason that all of the 11.52 per cent moved on Northern Pacific straight way-billing, presumably at Northern Pacific rates, while the interstate business which I eliminated would to a very large extent move on a proportion of a through rate and not necessarily follow the interstate rate or the Minnesota state rate in its billing.

Q. I meant to speak of distance and not rates.

A. I simply excepted that; I kept no track of the distance.

Q. It would be quite a factor, wouldn't it, if, for example, the interstate business that you left in (on the assumption

that you have referred to) on the average moved twice as far as the intrastate business,—that would make some difference, wouldn't it?

A. Now, to which are you referring? Are you referring to the 14.83 per cent or the 27.14? It seems to me—at least you confuse me on those things.

Q. Listen to the question, maybe we can come to an understanding of what I am trying to say.

Last question read.

A. I will ask again, did you refer to my 14.83, or did you refer in that to the difference between the 14.83 per cent and the 12.33 per cent, or between the 27.14 per cent and the 14.83 per cent? I am not clear on that even with your question read.

Q. You have just told us that, in getting at the matter of cost, you assumed certain interstate business moved on conditions so like the state business movement that the cost of doing the business was the same; now, that is underlying, isn't it?

A. Yes, sir.

Q. So, therefore, you found it unnecessary to get the really true state business, and left in what you call intrastate business certain interstate business, didn't you?

A. Yes, sir; I found it impossible to get those figures.

Q. Yes, found that impossible, Now, I ask you to assume it to be a fact that the interstate business so left in and called in your tables intrastate business, moved a greater distance on the average than the strictly state business, whether that would not seriously affect your problem making the cost per ton per mile lower than it otherwise would be?

A. It would, certainly, if I had the ton-mileage which applied to the 12.33 per cent (that is the reduced percentage). and that showed an average haul of less than my 14.83, it certainly would produce a different result to the extent of that difference, just as you suggest.

Q. The 12.33 per cent doesn't relate to the period or year

or any part of the year that you have made your income account at all on, does it? It has nothing to do with that whatever, has it? That relates to another year, the fiscal year prior to the first one that you examined? Isn't that true?

A. Yes, sir.

Q. Now, that was what Mr. Johnson found to be the percentage of true state ton-miles to the total ton-miles in the state, in the fiscal year of 1906, October, 1905, and April, 1906?

A. And which Mr. Johnson further stated that he believed would hold for the current year.

Q. Yes, and you examined two months, later years?

A. Yes, sir.

Q. One in one year and one in another year?

A. Yes, sir.

Q. Neither one of which was in Mr. Johnson's year; that is right, isn't it?

A. Yes, sir.

Q. And you found in another year a different percentage of state ton-miles to total ton-miles, didn't you?

A. Yes, sir.

Q. Now, with respect to the ton-miles that you found to be in fact the state business, there is in those figures a certain element of interstate business?

A. Yes, sir.

Q. Now, your computations are made upon the theory that all those ton-miles are homogeneous and that the interstate business included therein moved on the same carloading, moved the same distances, moved on the same rates, and was the same kind of stuff as the state business therein; am I right?

A. Yes, sir.

Q. And if you are wrong in any one of those particulars, then an error has crept in by reason of an unjustified assumption; am I right again?

A. You are right.

Q. Now, when you eliminated certain interstate business, did you compare the average haul of the business eliminated with that which you left in?

A. Up to the time when these tables were prepared there was no such figure in existence in either my possession or in the possession of the Northern Pacific Railway Company, according to their statements to me; that is, their ton-miles which appertained to the amount which they would reduce, were an unknown quantity and were not taken off by them, and therefore, in this assumption, it was necessary for me to consider the matter as homogeneous; and that error which you mention, if the tonnage which should be excerpted from my percentage should show a longer haulage, by that much my computation would be in error.

Q. Now, if, as a matter of fact, the Northern Pacific had made such an examination, or if you could have done it and showed what the interstate ton-miles was which was eliminated and showed what the state was, that would be a good criterion for you to determine, wouldn't it, whether or not your assumption as to average length of haul is right in that which you retained?

A. Certainly.

Q. Were you in court when Mr. Johnson testified introducing his Ex. 54?

A. I think so.

Q. You heard his testimony in that regard?

A. Yes, I was here.

Q. You heard him describe how he made this separation; he did it by commodities, didn't he?

A. I do not know, sir; I don't recollect now.

Q. Did you see the detail sheet which he handed to the Master at that time of those two months?

A. I have seen it, yes, sir.

Q. It wasn't offered in evidence, but I think either read into the record or explained to the Master.

A. If it wasn't offered in evidence as an exhibit, I did not see it.

Q. Well, I will let you see it now.

Paper handed witness.

A. This is new to me.

Q. Now, referring to this statement that Mr. Johnson referred to in connection with his testimony when Ex. 54—Johnson was introduced in evidence, it appears from this exhibit that he did his work by commodities for the month of October, 1905, and April, 1906, taking separately hard coal, soft coal, grain, lumber and shingles, live-stock, total commodities, merchandise and class rates, logs, wood, poles, etc. It appears from this that the true intrastate that portion retained, as hard coal, had an average haul of 123.7 miles, the interstate eliminated, 152.1 miles; soft coal, state, 140.5 miles, soft coal interstate, 151.3 miles; grain, state, 164.6 miles, interstate, 190.7 miles; lumber and shingles state, 107.8 miles, interstate, 113.3 miles; livestock, state, 143 miles, interstate 112 miles; total commodities, state, 135.3 miles, interstate, 139.5 miles; merchandise and class rates, state, 87.8 miles, interstate, 139.2 miles; total commodities, merchandise and class rates, state, 111.6 miles, interstate, 139.4 miles; logs, wood, poles, etc., state, 72.6 miles, interstate, 133.2 miles. Now, assuming that there would be the same variation for the period that you base your computation upon, and as respects the interstate which you retained, it would, in your judgment, make a very serious difference, would it not, as to the justness of the assumption which underlies all your computations here?

A. It would make a difference, certainly. Any change in the factors, as I have said before, would make a difference. How serious it would be would not be shown by Mr. Johnson's analysis unless he had proceeded to further analyze his re-

port in the method which I have adopted of how much of that was a divisional haul and how much was a local haul. You will notice by your divisions there—

Q. Wait a moment.

Mr. O'BRIEN: I think he is entitled to answer.

Mr. BUTLER: I don't think he has stated that he has shown how much was hauled divisionally or locally. He has stated what he thinks it is entitled to, and he says no railroad ever was operated or ever will be operated that way.

Mr. O'BRIEN: Well, that is a matter for you to ask in further questions or to argue, but the counsel asked the question whether it would not make a very serious difference—

WITNESS: In my statement—

Mr. O'BRIEN: —and I insist that the witness be allowed to answer the question.

Mr. BUTLER: I will let him answer. We perhaps ought not to have interrupted him, but constantly this witness keeps assuming that he has determined the movement by trains of this stuff.

The MASTER: Well, suppose that he just continue as he was doing until he finishes the answer and then if you want to take him up on that do so.

WITNESS: You will notice that the divisions on the Northern Pacific are practically 109 miles, 140 miles, 149 miles and 152 miles for through hauls. Most of the average hauls named there would entitle the intrastate to the same through haul and none of the average of the interstate is large enough to entitle it to a through haul over more than one division; therefore, a large proportion of the interstate traffic would of necessity be regulated according to the method which I have adopted to a local train haul, and therefore I say until that matter was determined I could not tell how serious a matter this would be to my figures by adopting that result.

Q. You never ascertained the routing or the manner of

movement of any of this business, did you?

A. Yes, sir.

Q. That it actually moved on?

A. No, sir, not that it actually moved on.

Q. You built up a speculative or theoretical or hypothetical ideal, and that is what you refer to in your answer when you say that it would have to be determined how it moved?

A. Yes, sir.

Q. Now, without regard to your computations at all, upon your opinion as an expert railroad man, assume that Mr. Johnson's computation was right, that the intrastate class business had an average haul of 87.3 miles and that the interstate eliminated had an average haul of 139.2 miles and that the ton-miles of state is 44 per cent of the total amount reported and of interstate is 56 per cent of the amount reported. I want your opinion on that assumption as to whether or not there would be a very serious difference in the cost per ton per mile of the two kinds of business referred to in my question.

A. There would be a difference and it would probably be a considerable one.

Q. Would it not be so great a difference, the spread being so great, (from 87.3 to 139.2) that a computation on the whole, taken together, would not be of any value at all to get at the cost of the true intrastate business on the short haul?

A. No, sir.

Q. Suppose the spread was from 80 to 200, what would you say?—the same percentage of ton-miles.

A. This is on the excerpted basis or the amount that is still retained?

Q. I am not speaking of that now. I ask you to give me your opinion as to the effect of average haul now on this class business. Assume that the state was 87 miles and that the interstate was double that, on the average; do you think that that would be so serious a difference that computations

based upon the mingling of them together would be worthless?

A. It would certainly necessitate their revision.

Q. It would be no good? A conclusion based on any such assumption as to the cost per ton per mile on the haul would be no good, would it?

A. As I said, the matter would have to be reworked.

Q. Yes, because as it stood it would be no good at all, would it? I say if it was not reworked it wouldn't be any good at all.

A. No, it would not show the practical state of affairs.

Q. Now, you had before you the data to show that very thing, did you not?

A. I did not.

Q. Why, it was shown here, wasn't it?

A. Where?

Q. In court, months ago.

A. I didn't see that, nor was a copy of that given us.

Q. Well, did you try to ascertain the average haul of the true state business?

A. Yes, sir.

Q. And couldn't?

A. I asked the Northern Pacific road—Mr. Johnson, I believe—for that and was informed that he had got the mileage on that percentage which he gave me.

Q. Did he tell you that he didn't have the data?

(No answer).

Q. When you took out, in your revision, the interstate business, you found out what the haul in Minnesota of that business was, because the points in Minnesota through which it moved were shown, weren't they?

A. Yes, sir.

Q. You had the tons and ton-miles, didn't you?

A. Yes, sir.

Q. Couldn't you find the average haul?

A. Yes, sir.

Q. Well, did you?

A. Yes, sir.

Q. What was the average haul of that that was eliminated, the merchandise taken as a whole?

A. You mean that I eliminated?

Q. Yes.

A. I don't know. I paid no attention to what I eliminated.

Q. What was the average haul of that that was retained?

A. My recollection is it was a little over 100 miles.

Q. Well, we will pass over that.

A. You understand, of course, that when I had made these tables and laid them aside that may have been a subsequent operation of Mr. Johnson's; I don't mean to say that, at the time I asked him, he had those figures, I don't mean to intimate that at all,—that he had them and was holding them back. At the time that I asked him they were not available.

Q. Do you consider that the length of haul is an important factor in determining the cost per ton per mile of the haul?

A. It certainly is,—

Q. One of the most?

A. —on account of the necessity of less than divisional mileage. Where it does not extend over a division, being assignable to the local movement, it makes a decided difference.

Q. One of the most important elements?

A. And, of course, as the average haul of a commodity would decrease it would necessarily increase the amount of that commodity which would be regulated to a local train.

Q. Well, don't you think it is one of the most important elements—(length of haul) in determining what a reasonable rate is or what the cost is? Do not the tables, the schedules of rates prescribed by the authority of the state which are the subject of litigation here, recognize a very wide difference in that—

A. Yes, sir.

Q. —and the length of haul, in your opinion, is one of the very most important factors in getting at the cost of the haul per ton per mile, isn't it?

A. Yes, sir, as it affects the operation over a division or under a division; and of necessity, as I said a moment ago, when you decrease the length of haul you would naturally increase the amount proportionately which would be regulated to a local train.

Q. There is a great deal besides the train-moved items, too, that is seriously affected by the length of haul measured in per ton per mile?

A. I don't measure the other expenses per ton per mile, if you will notice my analysis.

Q. No, but take the whole?

A. Yes, sir.

Q. I am not talking about your table. If you use the ton-mile as a basis, you divide your distance by two and you double your terminal charges, don't you?

A. If you use that as the unit of measurement, certainly, yes, sir.

Q. Now, what is interline billing?

A. Interline billing is billing from one road to another, the way-bill made on one road on the freight passing over that road and on to one or more other roads.

Q. It is often used where the full rate is obtained—generally so used—is it not? The mere fact that there is interline billing does not mean that there is a division of a through or proportional or that either road receives less than the full tariff?

A. Not necessarily.

Q. And as a rule they do not, isn't that true?

A. I should say as a rule they do receive less.

Q. As a rule?

A. That would be my opinion. I have not gone into that myself as thoroughly, probably, as I should, as to the making of rates, but my opinion would be that, as a rule, the interline billing would be at a less figure possibly.

Q. The rate per ton per mile of revenue under the rates that were in existence when you made this examination decreases as the distance increases, does it not?

A. Yes, sir.

Q. So that, unless your assumption be true that the haul is exactly the same and the commodities are exactly the same of the interstate included in your figures, your statement yesterday that the percentage of your interstate would be 14.83 per cent of total tonnage, tons moved in the state, total ton-miles and total revenue, would be arithmetically inaccurate, wouldn't it?

A. Yes, sir.

Q. You would never get the same percentage of tons moved as ton-miles, would you?

A. No, sir.

Q. Or of revenue as either of the others, would you?

A. The difference there reflected is—

Q. Just read the question.

(Last question read.)

A. No, sir, there is a difference there.

Q. I didn't ask you for the difference and will not take time to go into it.

A. I don't know but what I am entitled to state the difference. It is just as you say, sir.

Mr. BUTLER: I think he had better confine himself to the question. All I want to show by the witness is the fact that it is arithmetically inaccurate, and I think it absurd to assume that the percentage of tons, ton-miles and revenue would be the same.

The MASTER: Sometimes when a man says "No, sir," or

"Yes, sir," a little explanation shows, after all, that there isn't so much difference.

WITNESS: I am perfectly willing to let that go until the redirect.

The MASTER: Won't it shorten the whole examination somewhat if we have his explanation now?

Mr. BUTLER: All right.

WITNESS: The difference which would be indicated between the amount of money which was excerpted (by the difference which we have mentioned) and the tonnage would be represented by 5.92 as against 5.69, or .23 of 1 per cent.

Q. How about tons and ton-miles, the percentages, while you are on the subject?

A. Tons I wouldn't say. This represents the difference between ton mileage and the amount of moneys received.

Q. Well, make the computation; it won't take you but a moment.

A. I haven't the data.

Q. Haven't you the tons moved?

A. No, sir; I haven't the data.

Q. It is not on Table 5?

A. No, sir. I couldn't apply it to this.

Q. Haven't you the tons moved in the state?

A. No, sir, because this represents the amount per ton-mile.

Q. No, no; you have the total tons moved in the state, have you not, on Table 5?

A. Yes, sir.

Q. And you have what you call the intrastate tons in the state, haven't you?

A. Yes, sir.

Q. What percentage is one of the other—is the intrastate of the total?

A. 72.033 per cent.

Q. Is what?

A. The interstate of tons.

Q. 27 2-3, then?

A. About 28 per cent. Better say 28 per cent is intra and 72 per cent inter; that is close enough.

Q. That is, the tons are, roughly speaking, twice as much as the ton-miles in percentage total?

A. Yes.

Q. But you make the revenue come out practically the same?

A. Yes, sir.

Q. Give me the figure that you used for the revenue. Yesterday you told me you didn't have that, as I caught your answer.

A. The figure which we used for revenue is taken from the Northern Pacific Railway reports (as containing both errors originally) and shows $239,197.01 for the month of April and $317,185.26 for the month of October.

Q. That is the total revenue. What other item of revenue did you use? We are comparing revenue with revenue in this instance.

A. We used the revenue as shown by the Northern Pacific statements for local way-billing and interline way-billing.

Q. Did that include the error?

A. Yes, sir.

Q. Both errors?

A. Yes, sir.

Q. So you took the ton-miles with one error eliminated, did you not, and assumed the revenue that you compared with it for both errors in? That is the way that you kept the percentage of ton-miles intra to the whole in rhythm with the revenue of intra to the whole, is it not?

A. No, sir, I had the ton-miles which were based upon strictly Northern Pacific way-billing, which I used, and of

course by deduction I had the number of ton-miles which applied on the other.

Q. Give me the figures of revenue for the 14.83 per cent of ton-miles which you call true intrastate, the revenue for the year, to compare with the twenty-eight hundred odd thousand dollars total revenue of Northern Pacific as reported.

A. The figure you ask is shown on Table No. 8.

Q. What is it?

A. $2,075,514.99.

Q. What is the total earnings in the state?

A. $10,560,639.41.

Q. That makes about 21 per cent, doesn't it?

A. Yes, sir.

Q. So the ton-miles intra to total is about 14.83 per cent, the tons is about 28 per cent, and the revenue about 20 per cent; isn't that it?

A. You are comparing entirely different things one with the other. If you desire, I will enter into an explanation of my derivation of those methods. But you often have to use different factors to arrive at the results. You are comparing certain parts—

Q. You have given us the revenue of the 14.83 per cent of ton-miles, haven't you?

A. Yes, sir.

Q. And you have given us the total revenue for all the ton-miles in the state, haven't you?

A. Yes, sir.

Q. Well, we will ascertain the percentages ourselves. Now, returning to the matter of the papers you examined—you examined the way-bills, did you?

A. The way-bills to determine the losses, yes, sir.

Q. For no other purpose whatever?

A. No, sir.

Q. So, in order to get at the problem that you had in hand,

to find out, at least, (if it be considered dealing out) the profit at the rates which were actually applied, you would not need the way-bills at all, and your examination of the way-bills simply verified the percentages established by Mr. Johnson in the months examined; am I right about that?

A. Yes, sir.

Q. Now, have you given us all of the papers that you examined for the preparation of Table No. 5, that is, a description of all of them?

A. All excepting there was one matter which is an interline matter which is called "the Head of the Lakes movement," which I intended to include in my interline report as it is a report made up in the general office.

Q. And what is the name of that report?

A. They call it the Head of the Lakes movement.

Q. What does it show?

A. It shows the movement of the freight under contract with the Chicago, Milwaukee & St. Paul Railway from the Twin Cities to the Head of the Lakes.

Q. And it shows it by cars?

A. It shows it by carloads and less than carloads.

Q. And the carloading, and in that case the routing?

A. There is just one routing on that. There is no question in that. It also shows on that report. I was able to obtain the origin of the shipment, so far as the Chicago, Milwaukee & St. Paul Railway was concerned, and make the division between intra and interstate upon the basis of the point of shipment of the Milwaukee & St. Paul Railway.

Q. That is, the to the Head of the Lakes business?

A. Yes, sir.

Q. You determined its character as to state or interstate?

A. By the Chicago, Milwaukee & St. Paul origin or destination.

Q. Now, in the other direction how did you do it?

A. In the other direction it would be the same.

Q. So, as to the overhead billing and the Milwaukee business, if it may so be called, you separated state from interstate?

A. Yes, sir.

Q. From these two reports; but the interline billing or the straight way-billing, these abstracts of the agents or the agents' forwarded reports, you couldn't make any division?

A. Only as shown by the destination of the freight.

Q. But you didn't take it off at all? You didn't take off the state and interstate business from the first two kinds of papers that we have talked about?

A. Whenever it was shown, when the destination would show that either of the termini was outside of the state, it was taken off as an inter matter.

Q. And you kept that separate?

A. Kept that separate, yes, sir.

Q. Where did you get the rest of the state business or the interstate business?

A. There isn't any.

Q. That covers it all, does it?

A. That covers it all.

Q. That is, business coming to the Minnesota Transfer, for example, that is interstate and going to St. Cloud and moving on straight way-billing is all included?

A. Is all included, yes, sir.

Q. There is a large volume of that, isn't there, as a matter of fact?

A. You mean coming from state business?

Q. From outside points.

A. From outside points—that is the billing which Mr. Johnson excerpted, which is taken into account later on.

Q. But you built up this 14.83 per cent of the ton-miles as state?

A. All of the Minnesota Transfer business would be in the 14.83.

Q. That is what I say.

A. Yes, sir.

Q. And that is a very large volume of it, isn't it?

A. The volume is reflected, I think, very reasonably, as Mr. Johnson suggests, by his 2 per cent of the total traffic.

Q. Did Mr. Johnson say that it was 2 per cent of the total traffic?

A. No, sir, but that is the difference between his percentage and mine, and is very easily reflected in that.

Q. You examined on the same basis, didn't you, for different periods, you and Mr. Johnson?

A. No, sir, we did not.

Q. Did not examine on the same basis, and you think that the things that he took into account would cover that 2½ per cent?

A. Account for the difference, yes, sir; I have assumed that it would. I think I am correct in the assumption that they would account for that difference, as there would be a considerable quantity of such traffic.

The MASTER: Although taking different periods and, of course, different freight?

WITNESS: Yes, sir.

The MASTER: As I understood, it is generally conceded that the volume of traffic would hold about the same though the periods might be in different years.

Mr. BUTLER: My recollection is that his examination was before any change in rates here in litigation.

Q. That is right, is it not? His examination related to the period prior to the application of the merchandise rates, October, 1905, and April, 1906?

A. Yes, sir, that would be prior to that.

Q. And yours related to a period after the application of

that rate, did it not?

A. Yes, sir.

Q. And you assumed—or found out, I have no doubt—that the interstate rates on the straight way-billing was precisely the same as the Minnesota rates, both times, didn't you? That is to say, when the merchandise rates were changed you assumed, and perhaps you found out, that the interstate rates were changed too, on all of the business; is that right?

A. Why, I paid no attention whatever to the interstate rates.

Q. Now, do you mean that? Isn't your underlying assumption that the rates of that business that is left in precisely the same way it was, state or interstate business?

A. Certainly, sir.

Mr. O'BRIEN: Mr. Butler, is there any dispute about that?

WITNESS: Not the slightest, sir; we are in absolute accord on that. I supposed when you spoke of that you meant the regular interstate rates, not this little difference which occurs between Mr. Johnson's figures and mine; but if you are referring to the interstate business as a general thing,—

Mr. O'BRIEN: I was asking Mr. Butler if there was any dispute upon that question, that where the business was done on straight way-billing the rates were the same as the rates charged to the intrastate traffic.

Mr. BUTLER: I don't think there is.

WITNESS: Not as far as I am concerned.

Mr. BUTLER: The witness also said he paid no attention to the interstate rates whatsoever.

Mr. O'BRIEN: That was another question; you challenged that assumption, I supposed you disputed that proposition. Now, if it is disputed—

WITNESS: I don't dispute that at all, Mr. Butler, what you said regarding that, as long as we come to the matter where I come to that difference between the 14.83 and the 12.33.

Q. I want you to define definitely again (I think you have in direct examination) what you mean by through trains and local trains in your exhibits here.

A. The through trains are those which pass over an operating division practically without change; that is, they are first-class freight trains, so denominated on the schedule, and sometimes called time-freight trains. They are supposed to be made up at a divisional terminal and to go through to the end of the division, practically without change. As a matter of fact, they do frequently have one or two stops on a division and at those points they sometimes change the freight by shifting a car or two or leaving off a car or taking on a car; but, as a general proposition, we consider those through trains even though they do sometimes make those movements. A local train is one that carries the peddling car, the less-than-car-load-car of that division and loads and unloads from that car, makes all the stops and takes on and puts off what cars are necessary for the business,—the difference between an express train and a local train on a passenger.

Q. Did you ascertain what the Northern Pacific Company designates as through trains and local trains?

A. Yes, sir.

Q. Does it correspond with your definition precisely, in all respects that you know of?

A. Yes, sir.

Q. And you have made up in your tables—I think 6 is based upon tonnage of through trains and tonnage of local trains?

A. Yes, sir.

Q. What was the source of that information?

A. The train reports in the superintendent of transportation department's office.

Q. Made up on the reports from the conductors, to which we have referred before?

A. Yes, sir.

Q. And show the loading at the initial point and nothing else?

A. The loading at the initial point, yes, sir.

Q. If such a train was made up at St. Paul, it would show the loading going out of St. Paul and not when it went out of Minneapolis if it went through Minneapolis?

A. Yes, sir, at St. Paul and not Minneapolis.

Q. It would not show what the loading was going out of Minneapolis or Minnesota Transfer?

A. No, sir.

Q. And that illustration is generally true all along, is it not, both as to local and through?

A. Yes, sir. Frequently those trains will start from Minneapolis and report from Minneapolis,—we have a number of them reported from Minneapolis and from the Transfer and from St. Paul.

Q. I didn't understand that it assumed that they were all starting from St. Paul.

A. No, sir.

Q. But what I meant was this: it was the initial loading that was noted.

A. If you just say that it was the initial loading I have no disagreement at all.

Q. All westbound trains originating at St. Paul go through Minneapolis, do they not, on the Northern Pacific road?

A. Yes, sir, I believe they do.

Q. I don't know of any other way then of getting west; I don't think of any now.

A. No, I think they would have to go that way. You must remember that these trains are reported from, you might say, all of the terminal points, the three terminal points at the Twin Cities. There is the St. Paul train and the other trains through there; they are all included in the reports, but as

you say, it is the initial point of the reporting of the train which is recorded in Table 6.

Q. And these sheets that you refer to showed the loading, gross and net, at the initial point, and it was on the assumption that they went through without change of weight that your figures were made, and you justify that assumption by saying that the trains in the opposite direction load up at a corresponding rate to the unloading of the trains coming in the reverse direction?

A. Yes, sir, that would be the evening-up of the traffic.

Q. Train loading is a very important element on the cost per ton per mile of movement, is it not?

A. Yes, sir.

Q. Very important, isn't it?

A. Yes, sir.

Q. More important than the average length of haul?

A. Well, that would be pretty hard to say; it is a very important element, though.

Q. And the proportion that is in through, and the proportion that is in local trains, is very important on the total, is it not?

A. Yes, sir.

Q. In your Table 5, in giving the service which you have assumed the traffic would be entitled to, did you take into account train loading?

A. In Table what?

Q. No. 5.

A. No, sir, Table No. 5 does not show train loading.

Q. But it does show the proportion as between through and local trains?

A. Through and local freight, not trains, sir.

Q. Through and local what?

A. Local freight.

Q. What is the difference?

A. There is a good deal of difference between a through train and a local train and through freight and local freight, for the reason that you might possibly handle all the freight which was entitled to a through movement—might possibly be handled on a local train, you might handle a large portion of it on a local train.

Q. Oh, I understand that.

A. And I want to make that distinction, and I don't want you to get it confused in your mind, the use which is made of Table 5 and of Table 6.

Q. It is thoughtful of you but this time I was all right.

A. All right so you don't try to bring my train movement on to 5.

Q. In describing your hypothetical or theoretical service, did you estimate any train weight to accommodate the traffic?

A. No, sir, none whatever.

Q. In your whole computations, your whole computation is based upon service that the stuff is entitled to?

A. Yes, sir. If it doesn't get that movement it is discriminated against, no matter which way it may be.

Q. No matter whether it diminishes or increases the cost by the discrimination?

A. That is a matter that the railroad company or the public have got to take, whichever side it comes.

Q. Now, without determining train weight—that is to say, the weight of freight in each through and each local train—you couldn't make out whether you had trains enough or not, could you? On a hypothetical or theoretical service, you would have to know how many trains you had, wouldn't you?

A. Yes, sir, the absolute train movement, of necessity, must determine the cost of a through and local train.

Q. So now, in your theoretical service—"entitled to" service referred to in Table 5—no account is taken of the weight

of freight moved in either a through or a local train on the average, is there?

A. No, sir, and just there is the point that I want to caution you against in mixing Table No. 5 with a train movement.

Q. Have you figured out how many train miles would be needed of through trains and how many train miles would be needed of local trains to render the ideal service and give to each what it was entitled to without discrimination?

A. No, sir.

Q. Have you any opinion as to that?

A. No, sir.

Q Then you have no idea whether or not the number of train miles which the Northern Pacific actually produced in operation in Minnesota in these two months would be enough or too many train miles to give the ideal service, have you?

A. It was certainly enough to give the service, because they moved the freight; that is all I can say about that.

Q. Yes, but they didn't move the freight on your theory, did they?

A. No, sir, and that is just the point I am cautioning you against continuously, that they did not do it, nor was it ever intended that they should move it on that.

Q. So you built up a theoretical operation without taking into account the average weight of trains or the weight of any train or its load, or the number of train miles that would be required in the performance of the service, didn't you?

A. No, sir.

Q. What did you assume in that regard?

A. I assumed not an operation, as I have stated,—and it seems necessary to state it pretty often—that Table No. 5 has no reference, save incidentally, to the operation of the road; it is what it was entitled to. Table No. 6, Division A, gives

you the operations which you conducted and upon which your costs are based.

Q. But they didn't render the performance assumed in Table No. 5?

A. They did not, no, sir.

Q. And do you know how many train miles would be required to render that performance?

A. It would take the same number of train miles as hauled the freight, undoubtedly. They moved the freight.

Q. Why?

A. Because they moved the freight, that is all; they moved so much freight.

Q. Would it involve any more switching mileage to give to each what it was entitled to without discrimination, than to do it as the Northern Pacific did, or any less switching mileage?

A. That I couldn't tell you, sir.

Q. Any more cars required?

A. That I couldn't tell you.

Q. Any more car mileage required?

A. I should say it would require no more cars or car mileage to do it in that way.

Q. Did you take that into account when you were building up this theoretical non-discriminating service?

A. I find it again necessary to say that this theoretical service or movement has nothing whatever to do with the operation of the road. I don't seem to get that point to you, Mr. Butler,—

Q. I know that.

A. —because you continually refer to this as if it was an operating statement—which it is not—and therefore, when you try to make me apply an operating condition to Table No. 5 I will have to simply say that I can't do so.

Q. You say that the stuff ought to have moved, as be-

tween through and local trains, as indicated on Table No. 5, do you not? that it was entitled to be so moved?

A. Entitled, yes, sir.

Q. Now, to do that would require a certain number of train miles, wouldn't it, both through trains and local trains?

A. Most assuredly you would have to move your freight.

Q. Now, did you consider whether the same number of train miles, through and local, as the Northern Pacific actually performed, would do that thing?

A. No, but of necessity the same number of train miles would have to be performed to do it.

Q. That is your opinion; no greater nor no less?

A. No, sir.

Q. Any more switching miles required?

A. That I could not say.

Q. Any greater expense in handling or less?

A. This table does not refer whatever to any expenses. I can't answer that in regard to Table 5. You will have to confine yourself to Table 6 for that.

Q. Table 5 shows what the business was entitled to?

A. Yes, sir.

Q. If it had the service it was entitled to, would it cost any more for handling or any less for handling than it did actually cost the Northern Pacific?

A. That I am not able to say, sir.

Q. To render the service that the stuff was entitled to, would the carloading be the same or different from what it was on the Northern Pacific?

A. That I could not say.

Q. Did you ascertain, in any of your computations or examinations, whether the cars used for the intra traffic were or were not loaded as heavily as those used for the inter traffic?

A. Yes, sir, I made a computation of that since you asked practically that question yesterday and I have been looking

for that data. My impression was that the loading of inter and intra in carloads was very close together.

Q. And less than carloads?

A. And less than carloads as they employed practically the same cars,—the same car. As it is loaded indiscriminately in that car we will not have to consider that at all.

Q. Will you give me a full statement of your examination on that to-morrow morning?

A. I don't know whether I can by to-morrow morning or not, Mr. Butler.

Q. You have the data?

A. I have worked the data; whether it was kept or not at the time, I don't know.

Q. Well, bring it in.

A. I am trying to get that figured now, as I believe you practically asked for that yesterday.

Q. The same carloading in through trains and local trains on the Northern Pacific for carload business, and short haul and long haul, the difference in that regard.

A. There would necessarily be a difference in any class of traffic, but my recollection is that the amount of loading per car in carloads was practically a parity.

Q. In the through and local trains?

A. In the through and local trains, yes, sir.

Q. Give me that data, will you?

A. Yes, sir.

Adjourned until June 24th at 10 A. M.

FEDERAL BUILDING, St. Paul, Minn., Thursday, June 24, 1909, the hearing was resumed at 10 o'clock A. M.

CONWAY W. HILLMAN,
recalled for further cross-examination, testified:

By Mr. BUTLER:

Q. Did you find time since we adjourned last night to answer any of the questions we reserved?

A. No, sir, I have not as yet.

Q. In your Table 5 you treat all the tonnage to and from points on branch lines as local train tonnage?

A. As long as it was on the branch line, yes, sir.

Q. On the Northern Pacific road are there any junction points between branches and main lines which occur on the main lines between the termini of divisions?

A. Yes, sir.

Q. How did you consider tonnage on the main line in such case?

A. Local tonnage.

Q. Local train tonnage?

A. Yes, sir.

Q. In all such cases?

A. Yes, sir.

Q. That is to say, tonnage accumulated on the branch line and coming to the main line at a junction point between the termini of divisions was considered wholly as local train business, on both the main line and the branch line?

A. Yes, sir.

Q. You didn't consider that any of that could be entitled to any through service?

A. No, sir.

Q. Whether it ran over a whole division on the main line or not?

A. Oh, yes, sir; if it ran over a whole division on the main line, it was entitled to a through service. As I understood your question it was with reference to say, for instance, Winnipeg Junction, that is this side of the division terminal; coming down to St. Paul from Winnipeg Junction to Staples, that freight would be entitled to only a local train movement; from Staples to St. Paul it would be entitled to a through train movement. The same with reference to that junction point where the Little Falls & Dakota come on at Little Falls, the movement from Little Falls to St. Paul would be a local train movement. That freight would have no through train movement in Table 5.

Q. How about Wadena Junction, the branch that runs from Wadena to Oakes?

A. That would be the same basis. Is Wadena west of Staples? then it would have the movement from Wadena to Staples local, and from Staples to St. Paul *through*.

Q. As a matter of practice, do you know whether or not the junction business takes local service, on any part of the main line or on a part of the division from the junction to the end of the division? Do you know, as a matter of fact, what the practice is in that regard?

A. I only know that, (as I stated in my definition of a through train) while considering those trains moving entirely over the division, they will sometimes, at those junction points, take on an amount of freight or put off an amount of freight going.

Q. They would do it at all times if the through train wasn't loaded to engine capacity, wouldn't they?

A. They would, yes, sir.

Q. That would be generally?

A. Yes, sir, generally.

Q. So that would distort the "entitled to" service as compared with the actual very much, would it not?

A. No, sir.

Q. Well, if in the actual service a great deal more was handled in one class or other of the trains than in the "entitled to" tables that you have built, there would be marked distortion or difference, wouldn't there?

A. There is a decided difference between Table No. 5, the entitled to movement, and Table No. 6, the actual movement, but it would not in any way distort Table No. 5.

Q. Well, perhaps "distort" wasn't fortunate; but comparing one with the other it would be very different, indeed, wouldn't it?

A. Yes, sir, that is very evident. I was not dodging the word "distort," Mr. Butler, but in the way it was used it would not affect Table 5.

Q. We will say a shipment similar to a shipment from St. Cloud to Detroit, how would that be?

A. St. Cloud being in the center of the St. Paul division, and Detroit being you might say in the center of the Minnesota division, the movement from St. Cloud to Detroit would be considered as a local movement entirely in Table No. 5.

Q. Do you know the practice in that regard, what the general practice is or was during the period?

A. The practice, as shown by the train sheets of the Northern Pacific Railway Company, shows that that movement from there—there was a train which would handle that locally to the junction point (Staples) and from there on it would be handled by a train bearing a different number, on the Minnesota division, and therefore as a local matter, supposedly.

Q. Would be or could be?

A. The trains would have distinctive numbers, sir, and would be considered as such a local matter.

Q. Well, I know, but did they handle shipments of that character or similar shipments?

A. I didn't follow the shipments through, sir.

Q. You did ascertain that there were local trains that could do it, but whether they did do it you didn't ascertain?

A. No, sir, I did not.

Q. Didn't ascertain whether that sort of shipments was handled on through trains or not?

A. No, sir.

Q. If so, that again would make your Table 5 different from the actual performance, would it not?

A. The Table No. 5 is different from the Table No. 6, Division A, which shows the actual handlings; there is no question at all about that.

Q. Does anything you have got show the actual handling similar to the one I have last mentioned?

A. No, sir, because neither Table No. 6 nor Table No. 5 is designed to show each shipment from its beginning to its end; and yet on Table No. 6-A would be shown the amount of freight which was on a local train and the amount which was on a through train.

Q. When that started?

A. When that started; regardless of the fact whether or not it was such a movement as you indicate or an entire divisional movement.

Q. Well, would such shipments as the ones last mentioned be on either train, going in either direction, when the train started?

A. No, sir.

Q. Then your whole investigation omits that whole matter, does it not?

A. Yes, sir, Table No. 6 omits the intermediate points, as no data existed at the time of it that I could get ahold of.

Q. The net train ton-miles on local trains on Table No. 5 is what per cent of the total ton-miles?

The MASTER: Before figuring that out, is this the rule:

everything by you is counted as local whether it has its origin on a branch line or terminal on a branch line, unless it passes over an entire division on the main line?

WITNESS: That is correct, sir. 25.99 per cent of the total traffic, as shown on Table 5, was on local trains.

Q. Was entitled to move on local trains?

A. Yes.

Q. Is it derivable from subdivision A of Table 6, bearing in mind the manner in which Table 6 was made, what did move on local trains?

A. Yes, sir.

Q. What percentage?

A. 14.59.

Q. So the entitled to movement was 26 per cent, substantially, and the actual movement was 14.59 per cent?

A. Yes, sir.

Q. Measured in ton-miles on local trains?

A. Yes, sir.

Q. Now, let us look at Table No. 6. This table was taken from these train-sheets made up on information from the conductors, showing tonnage and weight at the initial points, as you have described?

A Yes, sir.

Q. Did you yourself make the division between local and through trains, or did the Company?

A. I made that in the Company's office, with the advice, as the matter progressed, of Mr. Richards' assistant.

Q. Well, you determined, then, from these sheets, what were the local and what were the through trains and what tonnage was attributable to each?

A. From these sheets, and I consulted him as I went along, and I did part of that work personally, in connection with Mr. Yapp, and it was then taken up by him upon the same lines.

Q. And this table is based upon the assumption that the estimated weights by the conductors, so reported, were right?

A. Yes, sir.

Q. No revenue depends upon such weights?

A. None whatever.

Q. And the purpose is this, is it not, as an operating matter each engine on the road has a rating and is determined to be able to haul so many tons behind it over the division? each engine is rated against each division that it runs over, isn't it?

A. Yes, sir, that was stated.

Q. And the purpose of this estimate is to show what the engine has to pull?

A. I don't know their purpose, sir, but I should judge that it was with reference to seeing that the trains are kept properly filled with traffic.

Q. Those sheets are peculiar to the Northern Pacific, are they? Are the reports of conductors from initial points as to the weights behind engines peculiar to the Northern Pacific or is that a common practice on all railroads?

A. Some such statement is common to all roads. It is frequently stated in different ways. Some keep their train movement on a loadcar-mile basis.

Q. I am not speaking of the train movement, I am speaking of the train's weight at initial point.

A. That is what I am referring to. I understood you to say the purpose of keeping track of this movement.

Q. No, but I asked you if it wasn't common on all railroads with which you are familiar for the conductors in some manner to report what weight is behind the engine when they start over their division.

A. Not all of them, no, sir.

Q. Generally?

A. As a general proposition, yes, sir.

Q. Now, the purpose of the report of the weight behind the engine at the beginning of the run is to determine what proportion of the capacity of the engine is being pulled, whether less than load, reasonably well loaded, or overloaded, and to keep track of the performance of that crew on that engine; that is the purpose of it, isn't it?

A. I should say it was, yes, sir.

Q. Well, now, then, do you still say you don't know what purpose the Northern Pacific had in taking and preserving that information?

A. No, I do not, but I can only judge. You ask me now if I have any judgment so I say I do.

Q. There isn't any doubt about it, is there?

A. Well, I don't think there is any doubt about it, that it is for the purpose of checking up the performance of the trains and seeing that the trains are properly loaded, and if the local train is not loaded to its proper capacity and isn't doing its work, they would then take off some of their extra throughs and load up the local and see that it was hauled on it.

The MASTER: For cars that go over the whole division?

WITNESS: Yes, sir.

Mr. BUTLER: ..., wait a minute.

The MASTER: That is the way I understood it. I wanted to see if that is what he meant.

Mr. BUTLER: I didn't so understand that. I want to be sure that he understands it.

Q. What do you mean by that, "going over the whole division?" The only report of the train weight made at all by the conductors, or anyone else, is the weight at initial point, is it not, without regard to whether the cars of the train at initial point run a few miles or run the whole length?

A. That is what this report shows, the only one I was able to get at on that point.

Q. Yes, and that is the only kind of report that you know

anything about, isn't it, on this road?

A. On this road, yes, sir.

Q. And there is nothing showing how far any of the cars went or how far any of the weight behind the engine went except perhaps the caboose, is there?

A. Not on this record.

Q. Now, then, in getting at what you call your net ton-miles on this Table No. 6, did you assume, or does that method of computation assume, equal tonnage in both directions on through trains and on local trains?

A. It assumes that the tonnage east on each train remained uniform from its initial point, and it also assumes that the tonnage west remained the same from its initial point, and in that respect that the tonnages east and west were equal, if that is what you mean.

Q. Then it did assume that the same number of net tons were moved and the same number of net ton-miles were performed by each class of trains, through and local, in both directions?

A. No, sir.

Q. Local trains?

A. No, sir.

Q. Through trains?

A. No, sir.

Q. The aggregate? I just understood your answer to say that it did assume that as many ton-miles were performed of the trains going in one direction as were performed of the trains going the other direction on the same track.

A. No, sir; the answer was not intended to convey that impression at all.

Q. Well, what is the fact about that? Does it so assume or does it not?

A. It does not, sir.

Q. The two assumptions that were made, to-wit, that the

weight at the initial point remains the same during the run east-bound and west-bound, are both false?

A. Are both incorrect, yes, sir.

Q. Does it assume that all through trains go through without change of tonnage?

A. Yes, sir.

Q. Again an incorrect assumption, is it not?

A. Yes, sir.

Q. Does it assume that as much tonnage moves on through trains in one direction as upon through trains in the other direction, and upon local trains in one direction as upon local train in the other direction?

A. No, sir.

Q. It doesn't assume that. Does it assume that the rate of decreasing loading in one direction is exactly the same as the rate of increasing loading in the other direction, or trains' weight instead of loading?

A. It assumes that the loading at the initial points remained the same from the commencement to the end of the run, in both east and west.

Q. Well, that doesn't answer the question.

A. That is the only assumption which is in the statement here.

Q. Yes, but you say that both those assumptions are false or incorrect, and then by reason of load increasing in one direction and decreasing in the other direction that they correct the falsity of the other two assumptions; that is the way I understood you. Now, in order to correct it, would it not require that the rate of decreasing load in one direction be exactly the same as the rate of increasing load in the other direction?

A. That would naturally follow from the assumption I have made.

Q. Then it is true that your computations here are based

upon the assumption that the rate of decreasing loading or weight behind the engine, trains moving in one direction, is exactly the same as the rate of increasing loading or weight behind the engine of trains moving in the other direction?

A. That would follow, of course, as the corollary to the method of handling.

Q. As a practical matter is that true?

A. No, sir, not exactly.

Q. No way to determine how near to it, is there, either?

A. Not in the method that the Northern Pacific records of through and local trains are kept.

Q. You haven't any opinion about it, have you?

(No answer).

Q. Does it not frequently occur that the empty movements are much greater for any given period—a day, a month, six months or a year—in one direction than they are in the other?

A. Yes, an examination of the Northern Pacific reports, or any railroad reports, will show that there is a variation in the amount of as they call it "loads and empties east" and "loads and empties west" for every year. They are never the same. I do not think in any case in ten years reports would exactly show the same figure, that is of necessity.

Q. Empty movements in either direction may be over more than a division, may they not?

A. Yes, sir.

Q. How moved, according to Table No. 6, in through or local trains, according to your classification between through and local trains, on the information from which Table No. 6 is derived?

A. Wherever it is over a division, the column headed "Dead Ton Miles" on Table No. 6 will show the movement of both the empties and the cars containing the loading.

Q. Well, I know, but how did you assume they moved, if you did, or how did you classify the movement of empties as

between through and local trains? You say empties moving over the whole division,—would that be all on through trains, or partly on through and partly on local?

A. On Table No. 6 there wouldn't be any such movement; the movement of an empty would be, of necessity, confined to the division, and in such case, if the through train started out with forty loads and two empties, those two empties would be considered as moving to the end of the division on the through train.

Q. How do the empties move, as a matter of practice, on through or local trains?

A. It seems to be a pretty even matter.

Q. What do you mean by that?

A. I mean that the percentage is slightly higher but less of a difference than I had thought when I looked at the matter, so that there are almost as many empties on the through trains as there are on the locals.

Q. You speak of car-miles?

A. In car-miles or in number of cars.

Q. So you think about half the movement of empties is on one class of trains and half on the other; I am now speaking of the actual performance, not the entitled-to performance.

A. I understand, sir. In the entitled-to proportion, the empties wouldn't enter into it. On that I should not say that one-half of the empties moved on a local and one-half of the empties moved on a through, but I should say that the percentage of empties moving on through and the percentage of empties moving on locals would not show a very heavy disparity.

Q. Between what?

A. The proportion between the loads and empties on a local and the loads and empties on a through.

Q. How about the ton-miles?

A. The ton-miles are shown right here.

Q. Well, I know, but how does the empty movement compare with the revenue ton-miles, as between through and local trains? Any idea about that, or can you tell us from your computations?

A. I couldn't tell you from these computations here; I could tell you from the basic figures from which they are computed.

Q. What is the source of your information as to the character of the trains moving empties?

A. The source was the train-sheets which I have mentioned, which were the basis of Table No. 6, Division A.

Q. Then the conductors reported the number of empty cars, too?

A. Yes, sir, loads and empties.

Q. At the initial point?

A. Yes, sir.

Q. And, of course, the movement of the empties was figured or estimated by you on the same assumptions as the ton-miles of freight?

A. Exactly, sir.

Q. Did you figure what the empty movement would be entitled to on the basis that you figured the ton-miles of freight on No. 5, as between through and local?

A. No, sir.

Q. You didn't take into account, then, what empty movement there would be if the "entitled-to" service indicated on Table 5 was given the business?

A. On that basis it would be absolutely necessary to give the empties the same proportion of movement as shown on Table 5.

Q. Would there be any difference in the weight of the loads between the entitled-to service and what you have assumed to be the actual service?

A. You are now coming back to the same proposition which

I have spoken of so frequently, of treating Table No. 5 as an operating table. The same relation of car loading, number of pounds to a car, and of the number of empty movements to a train, would, of course, if you made up a similar table to 5, including empties, have to be apportioned upon the basis of the tonnage on Table 5. There is no point where you can put Table No. 5 into an operating table.

Q. As a practical railroading matter, does the constancy or irregularity of the volume or flow of traffic affect the question as to whether it will move in one class of train or in another?

A. Yes, all of those questions have to be taken into consideration in the operation of a road, the volume of traffic and its operation.

Q. So the actual performance is determined by the demand, to some extent, is it not, both the demand for empties and the demand for movement of package freight, and all that? It determines largely, does it not, what class of trains would handle the business?

A. Well, that is such a self-evident fact that where freight is offered at any point and that point has a local service, that it must necessarily move to that point on a local train.

Q. Necessarily?

A. Certainly.

Q. If the local train moving was already loaded to capacity, then would it put on an extra so as to still have a local, or let a through train pick it up?

A. That would be an operating matter, sir, entirely.

Q. And those matters, in determining your classification between through and local trains on your Table 5, were not taken into account, were they?

A. That is not an operating table, no, sir.

Q. The Table No. 5 refers to through trains, does it not, and to local trains and to all trains?

A. There is a reference to through trains, local trains and all trains.

Q. And it purports to show the "entitled-to?"

A. The entitled-to movement.

Q. On what?

A. On those trains.

Q. And that is operation, isn't it?

A. No, sir.

Q. The movement—?

A. The movement of freight.

Q. The movement of trains or freight on trains isn't operation?

A. The movement of freight on trains is operation, yes, sir.

Q. Now, it requires operation to move tons of freight on local trains or on through trains?

A. Yes, sir.

Q. And to move as many tons as indicated on Table 5 as many miles as is indicated on 5 requires both kinds of trains and a certain quantity of each kind of train, does it not?

A. It certainly does.

Q. All of which is operation?

A. All of that freight was moved on one or the other class of trains.

Q. But wasn't moved in the manner of Table 5?

A. No, sir.

Q. Now, if you move freight in one manner, it requires one kind of operation, and if you move it in another, it requires a different kind; am I right?

A. Yes, sir.

Q. Now, your Table No. 6, subject to the limitations which you have expressed, as I understand it, is calculated to indicate what was done by the Company?

A. Yes, sir.

Q. And Table No. 5 is calculated to indicate what ought to have been done if the business received non-discriminating service as between through and local trains?

A. It shows the movement to which the freight is entitled, and I am afraid I will have to repeat, Mr. Butler, what I said, again, that it is not an operating table and has no reference to the operations of the road in the method it is used.

Q. But to perform the train miles indicated on that would require operation, would it not?

A. And the freight ton-miles as shown on Table 5 were moved in accordance with Table No. 6, which shows the method of operation, and that is the way they did move the freight; and I submit again that I cannot allow, as far as my testimony will go, any reference to Table 5 as an operating table.

Q. Will you allow me to refer to the matter of operation to perform the train miles on through trains and local trains that you have set up on Table No. 5?

A. Yes, sir.

Q. Now, you have told us that the freight wasn't moved on the non-discriminating theory as to service as indicated by Table No. 5, haven't you?

A. Yes, sir.

Q. Now, if it were moved so as to divide the work between through and local trains on the basis that it was entitled to, as you have set it up in No. 5, how much service would it take,—exactly the same service that was rendered, or would it take, in all probability, a service somewhat different?

A. A change in that respect, would, of course, necessitate a different service, and Table No. 6 would, under those circumstances, not be the same as it stands now.

Q. A different service would require a different cost or expenditure?

A. That is an axiom, sir.

Q. And how much difference is a matter you don't know and can't find out, can you, because you don't know the constancy of the volume of freight presented for transportation or the constancy of the flow of the traffic?

A. No, sir, if the relative amount of the traffic was changed from a through train to a local train, or from a local train to a through train, it would of necessity change not only the tonnages but the operating amounts chargeable to each class of train.

Q. And the volume of constancy of flow of traffic in one direction compared with the contemporaneous volume and flow in the other, would be a very important factor bearing upon cost of operation and absolutely determinative, as a practical matter, as to the trains that would be used, whether through or local?

A. Yes, sir, on that condition of affairs. Exactly how it happened is shown on Division A of Table 6. Had you reversed those conditions or changed them, it would have shown a different figure; but you did not, you handled it on those conditions. The handling as you did is shown—the results of that are shown on Division D, of Table 6, and perhaps that is what you desire.

Q. It bears upon the question of cost. Now, does Table No. 5—it doesn't separate the tons or the ton-miles as to direction of movement, does it?

A. No, sir.

Q. That would be a very important matter, would it not, as to whether it moved in both directions in equal volume contemporaneously, or for a time in one direction spasmodically, and then for a time in the other?

A. Not as this method is handled, no, sir.

Q. I am not speaking of how it is handled; it would be a very important matter touching the element of cost, would it not?

A. Oh, yes, sir. If you get me off these tables into the matter of the operation of a road, I should say it would be; leaving these tables out of question, it is a very important factor and one that requires the attention of the managers and the traffic managers of the road all the time.

Q. So, if there be assumed a kind of service as between through and local trains which never existed, it cannot justly be compared with the cost of a different kind of service in that regard which did exist, can it?

A. As an operating factor, the cost of the local train would be increased or diminished as you might increase or diminish the volume of traffic handled on that train.

Q. The cost per ton-mile of operation, or the whole train, now?

A. Cost per ton-mile.

Q. Well, let me see about that. We have a local train running over a division, and we have enough freight that day at the initial point to half load it, but we have more than the through train can pull, so we put in the other half of the capacity of the local engine with through cars that go clear through; does that increase or reduce the ton-mile cost of all the freight handled on the local train per ton per mile?

A. Over what would it cost if you hadn't moved it that way?

Q. Yes.

A. Yes, sir, that would reduce the cost per ton per mile.

Q. On the local freight?

A. On the local freight, yes.

Q. That would make it appear that the freight that was local on that train was being moved at a cost very much lower than what it was moved at in fact, would it not?

A. Yes, sir.

Q. And the converse of that,—

A. Yes, sir.

Q. —if your local train is full and you have some local cars going part way down the division, to Detroit or St. Cloud, as the case may be, (where the engine is to stop for water, anyway,) and you put the local cars in the through train to fill out the through train's capacity, what effect would the adding of the local business to the through train have upon the apparent cost of the per ton per mile of the strictly through business?

A. It would increase that.

Q. So the mixing, then, would tend to bring the two together; is that right?

A. When you—

Q. Apparently?

A. As far as you abandon the through movement and make your through movement a local movement, in that respect it would, as you say, tend to bring the cost of your trains together.

Q. So, if you wholly disregarded division between through and local business as respects through and local trains, the cost per ton per mile on all trains would be about alike, wouldn't it?

A. Necessarily.

Q. So then, in determining the actual cost of any business, it is quite important to know, is it not, how the business was actually handled?

A. Yes, sir.

Q. And it would be foolish, would it not, to assume that it was handled in some other way and determine cost on the basis of handling in some other way? That is foolish, isn't it?

A. I have expressed myself on that not quite as broadly as you did, Mr. Butler, when I declined to allow you to mix Table No. 5 with Table No. 6, and in that declination I expressed myself that that was rather a foolish method to do,

though I didn't use the term as broadly, but that is what I intend when I decline to let you use it.

Q. It is foolish to assume one service and apply to it the cost of another service?

A. Yes, sir; as I say, I have been trying to impress that on you for an hour or so.

Q. That is perfectly absurd, is it not? Isn't it?

A. Yes, sir.

Q. Did you note the movement of empties on the Northern Pacific in Minnesota for the year mentioned?

A. I have noted it, yes, sir.

Q. What did you find?

A. I don't recollect now. I have looked at that matter, though. I can quote from the annual report.

Q. I have it here, I think. Page 61 of the report to the Commission in 1907 shows the empty car miles east-bound, 12,709,450; west-bound, 6,682,846; loaded east-bound, 30,384,294; west-bound, 38,866,595.

A. Yes, sir, I believe that is correct.

Q. About double the number of car miles in one direction as in the other?

A. Yes, sir.

Q. How would it have been in that regard if the business was moved in fact as it was entitled to be moved on the basis of the non-discriminating service which you have referred to in Table No. 5?

A. Off-hand, I should say it would make no difference whatever.

Q. How do you say that? Can you tell that without knowing the constancy or spasmodic character of the flow of the traffic?

A. Most assuredly.

Q. It wouldn't make any difference? The movement of empties, then, doesn't depend upon the constancy of the flow

of traffic in one direction as compared with the constancy of the flow in the other?

A. Why, it certainly does depend on that.

Q. So then, until you know what the constancy is in one direction compared with in the other, you can't even approximate, can you, what the empty-car movement would be?

A. No, sir; but if you will understand that the conditions which go to the handling of those empties, no matter whether they move two to one, as you suggest, east or west, or four to one east or west, is reflected absolutely by your expenses and by this movement which we have given in Table No. 6, and therefore those operating conditions of the movements of your empties have been provided for both in your ton-miles moving on through and local trains and the expenses of moving those trains.

Q. The only expenses that you had to deal with at all were the expenses actually incurred?

A. Absolutely.

Q. For the service actually rendered, and you didn't have anything to do with any expenses that would have been incurred had the service been different, did you?

A. No, sir, I didn't attempt that.

Q. You started out with one service, one volume of service and one volume of expenses?

A. Yes, sir.

Q. Then you revised the business to classify it between through and local trains,—which would require entirely a different service—didn't you?

A. I will have to state again that the absolute tonnage shown on No. 5 was moved in the method indicated on No. 6, and the cost thereon established. If it had been moved in a different manner, there is no question that the expenses would have shown in a different relation.

Q. And if it had been moved, as between through and local

trains, as indicated on your Table No. 5, the expenses would have been entirely different?

A. The expenses would probably have been different.

Q. Would furnish no guide to anything, would it?

A. What furnished no guide to anything?

Q. Table No. 5.

A. Well, it furnishes a very decided guide to a great deal.

Q. To what it would have cost had the business been done that way?

A Oh, not to the cost.

Q. That is, the service that never was rendered or could be rendered furnishes a guide to the cost of service that was rendered?

A. You are again mixing the data. I will say in answer to that question, if you will allow me, in two points, as I think you mean the question, it furnishes no data whatever as to what the cost would be moved on that basis, but it does furnish data for the cost which we have set up further along in Table 6.

Q. I think I have asked you this question, Mr. Hillman, once before, but will ask it again: Table No. 5 is ideal operation; that is, it would require ideal operation to move the ton-miles in the way there indicated; and my recollection is you said you could not tell whether that would increase or lessen the actual cost of moving it in the way it was actually moved?

A. Yes, sir, I believe I did make that statement; at least I should say so now.

Q. Then of course if the conditions were such that a departure from the ideal classification of the business between through and local trains would be economical, it would be the duty of the Railroad to depart from it?

A. Absolutely.

Q. And those conditions arise constantly, do they not?

A. They do.

Q. And a railroad manager that would undertake, in this part of the country, in view of all the circumstances attending the traffic, to give this non-discriminating and entitled-to service, would probably be an inefficient operating man, would he not?

A. I would say, as I did before, that such service is never rendered on any road, and in my view of the operating matter, it would be impossible to render absolutely such service.

Q. Yes, or anything near it under given conditions?

A. Under given conditions. That is well illustrated by the ideal service which is sometimes claimed on through freight, that a car would start at Staples and end at Ellensburg and the train would go through. As a matter of fact, there is no such train moves on the road.

Q. Table No. 5 is not a criterion of expense, is it, nor you don't intend to use it as a criterion of expense?

A. No, sir.

Q. It is built up as your criterion of movement, isn't it?

A. Yes, sir.

Q. But expense depends upon the propriety of the criterion under the circumstances of the business, doesn't it?

A. The expense depends upon the actual movement.

Q. Yes, sir.

A. Upon the actual movement.

Q. And computations based upon building up of a criterion of movement are of no value against actual conditions, are they?

A. Not to base the absolute expense of the handling, no, sir.

Q. Or the whole cost of freight operation, I mean, or any part of it?

A. They are not in determining the absolute operating expenses, taken as a whole, on the road in question.

Q. In your subsequent computations in the divisions that

are made between state and interstate costs, are the data appearing on Table 5 used as a basis for divisions?

A. Yes, sir.

Q. That is one of the principal purposes of the Table, is it not?

A. Yes, sir.

Q. And when I said "divisions" I mean the division between state and interstate costs in Minnesota in the freight business.

A. I so understood you, yes, sir.

Q. Can you give me, without very much delay or inconvenience, the percentage of the total expenses that the aggregate of the train movement, items 10 to 27 are?

A. 34.32 per cent of the total freight expenses, state of Minnesota, are included in accounts 10 to 27.

Q. That leaves 65.68 per cent outside of that?

A. Outside of the train movement items, yes, sir.

Q. Those items of expense are all common between state and interstate freight business, are they not?

A. Yes, sir.

Mr. DURMENT: That is, 65 per cent?

Mr. BUTLER: Yes.

Q. That is, were some of the items making up the 65.68 per cent divided by the data or criteria built up by you in Table No. 5?

A. Yes, sir.

Q. All?

A. No, sir, not all of them, but it enters into a great many of the computations.

Q. I want to know what per cent of the total Minnesota freight cost was divided between state and interstate on the basis of the data furnished by Table 5, and also the aggregate amount of money that was divided in that way.

A. I will look it up and inform you.

Q. Your computation, separation between state and

state, shows 14.83 per cent of all the ton-miles in the state to be intrastate?

A. Yes, sir.

Q. Which included an error?

A. Yes, sir.

Q. And assumed that Mr. Johnson established for two prior months the actual intrastate to be 12.33 per cent ton-miles of the same thing, did you not?

A. Yes, sir.

Q. And so understand the fact to be?

A. Yes, sir.

Q. And based all your computations upon it?

A. Yes, sir.

Q. That leaves between you 2½ per cent of all the ton-miles in Minnesota?

A. Yes, sir.

Q. Which increases the actual intrastate ton-miles, assuming Mr. Johnson's figure to be correct, by a little more than twenty per cent, does it not?

A. I think you have stated that wrong. My figures for the actual business are a little more than 20 per cent greater than Mr. Johnson's.

Q. And if your assumption is right that the same percentage of intrastate to interstate would appear in this error in these various months, notwithstanding they are in different years, that indicates that you have increased the true intrastate business over 20 per cent in your 14.83, upon which some of your computations and divisions are based?

A. Yes, sir; and at the same time I have included in my expenses the expenses of the full 14.83 per cent—a point that I don't want you to lose sight of.

Recess until 2 P. M.

AFTERNOON SESSION.

Q. Before adjourning I asked for a statement of the percentage of the total interstate freight cost that you divided on data provided by Table 5, and a like question as to state freight.

A. Of the total freight expenses as shown upon Table No. 7, 91.578 per cent is divided upon factors established by Table No. 5. In using these factors in Table No. 5 (the use of Table No. 5 which has been under discussion,) that is, its division into through and local movements, 36.136 per cent of the total expenses have been divided upon Table 5 with this use of through and local train movement shown on Table No. 5; 55.442 per cent have been divided upon the factors based in Table 5 but the use of such factors as shown by the so far undisputed facts of tons and ton-miles inter and intra. This leaves about 8½ per cent which are divided upon Table No. 7 with no reference to the factors in any way contained upon Table No. 5. Do you wish the money amounts?

Q. The total amount divided; that is, the 91.578 per cent would be how much money?

A. Would be $5,401,712.01, as against a total freight expense as shown upon Table No. 7—

Q. Taken from Table No. 4, isn't it?

A. Yes, sir, taken from Table No. 4,—of $5,898,460.06.

Q. So that as to the 34.32 per cent which you referred to just before adjournment this morning as the percentage of the train-movement costs for freight business in Minnesota to the total costs in Minnesota, it is also divided upon some of the elements, or the division is based either directly or indirectly upon some of the elements contained in Table 5?

A. Yes, sir, that is included; that 34 per cent is included in the 55.442 and also included in the 36.136 which I mentioned, with one slight exception.

Q. You referred in your first comprehensive answer this

afternoon to a "so far undisputed" 14.83 per cent; that is the ton-mile percentage of what you call intrastate to the total in the state,—that is what that figure refers to?

A. Yes, sir.

Q. And that is conceded by you to contain something over 20 per cent of ton-miles of interstate business; that is not disputed, is it?

A. No, sir.

Q. For some divisions you used ton-mile elements derived from Table No. 5?

A. Yes, sir.

Q. For others you used other elements, didn't you?

A. Yes, sir.

Q. Name the various elements used in making this state and interstate division of freight costs. Some were tons, were they not, dividing some items on the basis of tons?

A. Some were tons.

Q. State and interstate?

A. State and interstate.

Q. Some ton-miles state and interstate?

A. Yes, sir.

Q. Anything else?

A. The handlings of the interstate and intrastate freight also enter into the computation.

Q. That is, what do you mean by "the handlings," the train mileage?

A. I mean the warehousing of the freight, in other words.

Q. Is that taken from this Table No. 5?

A. It is taken from the sheets upon which Table 5 is based.

Q. What I wanted to get at, your Table No. 5 shows tons and ton-miles, state and interstate, through and local trains?

A. Yes, sir.

Q. Now, you have used tons, state and interstate, for certain divisions, ton-miles, state and interstate, for certain divi-

sions; have you used tons on through and on local trains for any divisions?

A. No, sir, that doesn't enter into it.

Q. Do you use any factor relating to the through and local train performance shown on Table 5 as an element of division of any item?

A. Yes, sir.

Q. What other elements in Table No. 5 have been used for dividing certain of the common expenses between state and interstate freight business?

A. The total ton-miles inter and intra, the total tons inter and intra, and also in certain cases the tons and the ton-miles, carloads and less than carloads, inter and intra.

Q. Each one of the items indicating a separation between state and interstate on Table 5 has in it an element of interstate business—the ton-miles 20 per cent; and the others varying percentages, have they not?

A. Yes, sir, they all have that element.

Q. The so-called intrastate tons there are excessive, are they not?

A. Yes, sir.

Q. And excessive both as to tons and ton-miles upon through and upon local trains?

A. I should judge they would be, yes, sir.

Q. And these percentages would vary, and the amount of the variation has not yet been computed, has it?

A. I believe I stated it yesterday as about 23-100 of one per cent.

Q. You stated what as about .23?

A. The variation between the money and the ton-miles.

Q. Well, now, do you mean that, Mr. Hillman? was that the percentage of one per cent?

A. .23 of one per cent.

Q. The ton-miles intrastate shown in Table 5 is 20 per

cent plus in excess of the truth, is it not?

A. 20 per cent in excess of the accepted figures.

Q. Yes, of what you believed to be the truth?

A. Of what I have accepted as the truth, yes, sir.

Q. And what you believe to be the truth in fact, do you not?

A. Yes, sir, I will state that.

Q. And assumed it to be the truth for the purpose of your computation?

A. Yes, sir.

Q. Now, you say that the amount of interstate revenue covering that 20 per cent of interstate ton-miles is only .23 of one per cent in excess of the true revenue?

A. I mean by that, that having accepted the reduction in intrastate earnings from 14.83 per cent to 12.33 per cent,—

Q. Of earnings?

A. Yes, sir.

Q. Where did you get that percentage?

A. From Mr. Johnson's table.

Q. Where did you get the 14.83 per cent of earnings?

(No answer.)

Q. Aren't you confusing ton-miles and earnings? You are or I am.

A. Well, perhaps I had better state it in a little better form. I see where it is clear to me, but it is a little confusing in the method I have stated it.

Q. Well, I will just withdraw the question and ask you if you have disclosed in 14.83 per cent of earnings as showing the true intrastate earnings, and if so, where. Table 5 doesn't show anything about earnings, does it?

A. No, sir; 14.83 is the percentage.

Q. That is the percentage of intrastate earnings to the total earnings in the state, is it?

A. No, sir, it is the percentage of ton-miles.

Q. And you were confusing ton-miles?

A. I was confused for a moment, I will have to take it back.

Q. I didn't mean to ask you about earnings at all. This shows the interstate tons, does it not?

A. Yes, sir.

Q. And there is an error in that, isn't there, of the number of tons that it required to make up the 20 per cent of error that is included in the 14.83?

A. Yes, sir.

Q. Now, how many tons that would be or what percentage of the total tons that would be, you haven't determined, have you?

A. No, sir.

Q. So you can't tell us how much swollen the intrastate tons shown in Table 5 is, can you?

A. Only by the reduction which you have mentioned.

Q. I didn't mean to mention any reduction.

A. You have mentioned the 20 per cent reduction, did you not?

Q. Yes. Does each ton produce the same number of ton-miles? Doesn't that depend upon where it goes?

A. Yes, sir.

Q. And we figured that out yesterday, and made it very different from the 14.83, didn't we?

A. I don't know; I believe Mr. Johnson did submit an exhibit of that character.

Q. No, you figured it yesterday during your testimony. didn't you? Well, we will let it go if you don't remember.

A. I don't remember about it.

Mr. BUTLER: The purpose of my inquiry was this. Nearly all of the cost of doing the freight business in Minnesota is common between state and interstate; it is all common, but 91½ per cent of that, plus, has been divided on factors ap-

pearing on No. 5. Some divide it on train mileage as a factor; some divide it on tons; some, I think, on the number of cars, and so on. There is no revenue on No. 5. Now, it is shown here that of the ton-miles which are stated on Table No. 5 to be intrastate, there is an error of 20 per cent; the truth is increased 20 per cent and a fraction, as to tons miles; now, of course, there are also some interstate tons there, and I wanted to find out or disclose that; it hasn't been shown yet what the percentage of interstate in that is. There are also, undoubtedly, some interstate cars included as intrastate, I wanted to find out what that variation would be, what the excess percentage *there* would be.

Q. Now, Mr. Hillman, if you understand what I am driving at, tell me whether or not the amount of interstate tons included in the intrastate tons on Table 5 is—that is, what is the percentage of error there. It is manifest to me that it can't be precisely the same as the ton-miles unless it be mere chance.

A. I do not know that percentage, but in the method of handling it it has been treated as the difference between 12.33 and 14.83.

Q. That is 20 per cent?

A. That is 20 per cent. Now, the basis of that assumption, that the tons decrease in the same percentage as the ton-miles, is in the fact that, on the 27.14 per cent originally stated by the Northern Pacific road as intrastate, the average haul is 111 miles, or, to be more correct, 110.9 miles, while the average haul, as shown upon this method here, is 111.9 miles; therefore, I have assumed that, if in reducing the percentage from 27.14 to 14.83 by excerpting an interstate haul we did not affect the average haul to any serious extent, the further excerptation of only one-fourth of that amount or of the difference between 14.83 and 12.33, would not seriously affect the same average haul, and would therefore leave the

haul on practically the same basis, and that the assumption that the tons were decreased in the same proportion as the ton-miles, while they would not be arithmetically correct, would not place a factor in the final computation where I made the reduction from 14.83 to 12.33—would not affect that seriously or hardly perceptibly.

Q. If your assumption that the average haul, state and interstate, in this so-called state business that you have on five is the same, is not well founded, that error pervades your whole computation and destroys the value to a great extent of the results shown, does it not?

A. Yes, sir, to a certain extent it would.

Q. If it is true, as shown by the statement of Mr. Johnson accompanying his Ex. 54, that the interstate business which he found included in the error had a haul of 139.2 miles and the state business which remained had a haul of 87.3 miles, it would make a very grave error, would it not, in the part of the business that I have referred to (that is, the class business,) taken as a whole?

A. Not unless the amount excerpted by Mr. Johnson bore the same relation which is spoken of there; it wouldn't affect it to the extent which 87.137 would indicate.

Q. Well, not the whole, of course, but it would the business covered, would it not, the merchandise rate business?

A. Yes, sir.

Q. Now, if it is also true that, of the total referred to by Mr. Johnson in that testimony and that statement, the average interstate was 139 miles and the average state 102.5 miles—that is, taking the whole tonnage involved and the average haul of it all divided between state and interstate—if that is true, that would make a very serious error in your whole conclusion, would it not?

A. As I have said before, any change in those figures would affect the total result. How serious it would be I

could not tell until it was computed, but a difference of from an average of 111 miles to 102 and a fraction miles would not be very serious in the total computation.

Q. Twenty-five miles difference in the haul wouldn't make any serious difference?

A. The figures quoted do not show twenty-five miles difference, Mr. Butler. You just quoted 102 and a fraction for intrastate, as I understand it, did you not?

Q. 102½ and 139 is what I quoted. Assume the total state to be 102½ and total interstate 139, that makes 36½ miles difference; would that make any serious impairment of the value of your result as a total?

A. No, sir.

Q. Not a bit.

A. I did not say not a bit, for this reason, you must remember that in my computations the average haul which I am considering, which matches against your 102 miles, is only 111 miles when you come to the excerpting of mileage to bring it down.

Q. Well, I am asking you the question whether or not the variation in hauls of these interstate tons that you have included as state tons in Table 5 of 36½ miles would be a serious matter and seriously impair the value of your computations, or whether it would be slight and negligible.

A. If there was any such percentage, it would be a considerable matter, but as I have stated, and as I understand you to read your statement, no such difference in the hauls as between my treatment of it and yours existed.

Q. Did I read your treatment of it?

A. You are intimating that the haulage used by me on Table 5, the average intrastate haul, is reduced by the 36 points, while—

Q. Miles, not points.

A. Miles;—while from your own statement, as read, it is

only shown to be reduced nine miles.

Q. I call your attention to the grand total that I did yesterday, which states the Minnesota intrastate grand total at an average haul of 102½ miles, the interstate 139 miles, derivable from the statement handed the Master by Mr. Johnson in connection with his testimony covering Ex. 54. Now, I ask you to assume that that is true,—36½ miles difference; would that make any serious difference in the result of your computations?

A. Following the figures, the average haul which you have given there, it would make a difference in the result from that shown upon Table No. 5 and would considerably decrease the cost of handling, or would, to a certain extent, decrease the cost of handling of intrastate freight.

Q. That is, if the longer-haul business was eliminated, that would increase the cost of hauling what was left, would it? The interstate is the longer haul and erroneously included; now, if that were eliminated the effect, by your method of computation, would be to decrease the cost of what remains, would it, Mr. Hillman?

A. No, sir, you are now confusing the record again, slightly, in this way, that you have given me an average haul on the 12.33 per cent of 139 miles for interstate freight.

Q. Is the 12.33 interstate freight?

A. You have given me the basis of 102 miles as the average haul of intrastate freight, have you not?

Q. Is the Johnson percentage 12.33 interstate freight?

A. No, that is intrastate freight. I should have said on the basis after excerptation to bring it to the 12.33 basis.

Q. It is a very simple matter. In your 14.83 there are certain interstate tons included?

A. Yes, sir.

Q. Now, if they were hauled 139 miles, and those that remained were only hauled 102½ miles, on the elimination of

the interstate business you are eliminating long-haul business. Now, isn't it perfectly obvious that that would increase, or ought to by any fair method of computation, the cost per ton per mile of doing the short-haul business remaining?

A. I did not understand Mr. Johnson's table to show that at all. I did not understand that he showed that of the amount excerpted (that is, the 20 per cent which has been so often referred to) showed an average of 139 miles hauled. I did not so understand his statement.

Q. But I am asking you to assume that.

A. If we so assume, that the excerpted 20 per cent did travel 139 miles, it would affect the result to a certain extent and would increase the cost of the state business.

Q. Do you want to withdraw your answer a little while ago made under an erroneous impression that it would increase it?

A. No, sir, I do not desire, because the record shows that it was made under an erroneous impression.

Q. In subdivision D of Table No. 6 you undertake to establish the relation of through and local train movement, do you not?

A. Yes, sir.

Q. In doing that you use factors derived from Table No. 5, do you not?

A. Yes, sir.

Q. What factors?

A. The intra ton-miles on through and local trains, and the inter ton-miles on through and local trains.

Q. If the intra ton-miles which actually moved on local trains were in excess of the intra ton-miles which you have attributed to local trains under your "entitled to" Table No. 5, what effect would that have on the actual or relative cost of doing intrastate business?

A. None whatever.

Q. Is it true that intrastate ton-miles can be produced on local trains as cheaply as they can on through trains?

A. No, sir.

Q. Then it does not make any difference at all in getting at the relative cost of one to the other, whether you get the true interstate local ton movement or not?

A. The excess of cost is not inter and intra; it is through and local. Having established the cost of the movement on a through train and a local train of a ton-mile, the question then comes as to what the freight is entitled to, to show what its true cost is, not the way that it may have been arbitrarily handled by the operating department; and, therefore, I say that, having the through and local train cost per ton-mile, it should then be applied as the tonnage should have moved as shown upon Table No. 5. Should this not be done, it would not be just to either interstate or intrastate to saddle it with the expense, as in full justice the amount which should have been regulated from one class of train to the other should be upon the percentage basis of the total traffic shown as entitled to a movement on through or local trains.

Q. Did you intend by your long answer to answer affirmatively or negatively?

Last preceding question read and added to—"on local trains"?

A. It makes no difference, in determining the relative movement, as to whether you get the amount of either class which moves on a local or a through train.

Q. I meant to speak of relative cost; you speak of relative movement. What do you say to the question so understood?

A. As I understand your question—

Q. Just read it.

Question read.

A. No, sir, it does not.

Q. So then, it would be just as well to assume any figure

for the intrastate local ton-mile movement on local trains?

A. Not at all, sir.

Q. Well, if any figure will do as well as the truth, why can't you assume just any figure?

A. For the simple reason that the cost, as I have just stated, depends upon the local and through movement; it does not depend upon whether it is an inter or intrastate. Having determined the local and through movement cost, the relation of one to the other, it then becomes only necessary to apply those costs to the amount of inter and intra tons which were entitled to move on a local train. There, again, you confuse the legitimate movement with the actual operating conditions.

Q. You say that the movement the Northern Pacific gave this stuff was not a legitimate movement and that it was an arbitrary handling by the operating department, and that that is not the test of the relative cost of one to the other or the actual cost; do you say that? Well, I will withdraw that question.

A. I am willing to answer that.

Q. That may be argument and I may be misled again so I will withdraw it and ask you if this is not true: that the greater number of ton-miles of intrastate business that are produced by local train movement the greater the cost, other things being equal.

A. That is correct.

Q. And the more the intrastate ton-miles are moved on through trains, the lesser the cost, other things being equal.

A. Yes, sir.

Q. And you have given under your "Entitled-to" Table the ideal and highest possible amount of intrastate ton-miles to the through trains, make that the test and say that the arbitrary handling by the operating department of the Rail-

road Company is not to be the test of fixing the cost, do you not?

A. I do, absolutely, sir, and affirm it.

Q. And now supposing you made a mistake in making 5 and your entitled-to table, and made thereby too much intrastate ton-miles to through tons, the effect of that would be to lessen the cost of the intrastate business; isn't that true?

A. Yes, sir.

Q. Supposing the Railroad Company made a mistake in their arbitrary handling of the business and didn't haul as many intrastate ton-miles on through trains as you attribute to it in this ideal non-discriminating table that you have made, your result then would be, other things being equal, just so far from the truth of the actual cost, would it not, and you would be treating the case not on what the cost was but what it ought to be?

A. That would be true, yes, sir; but I have a statement to make from that; it is that the way that you have suggested leaves it optional with the operating department to increase the cost of any class of freight that they may desire, inter and intra, which right, for the purposes of this investigation, I absolutely deny exists, and therefore insist that the use of Table No. 5 as shown in Division D is absolutely justifiable and correct.

Q. In your last answer when you used the words "this investigation" you meant this litigation, didn't you?

A. I did, yes, sir.

Q. That is, it is your idea that the operating department having control of the through and local train movements, may move the stuff as they see fit and improperly accumulate excessive charges on the intrastate business, and when Mr. Staples and his associates make some rates, for us to come in and show the cost and knock out the rates on that ground,—

you deny that they have any right to do anything of that kind, don't you?

A. I mentioned it as a possibility not as the absolute fact.

Q. And therefore you say that the computation in rate litigation like this should be based on not what was but what ought to be?

A. There you again—

Q. That is, should be based not upon the arbitrary handling by the department of the Railroad (I will amend the question in that way) but upon the "entitled-to" method here shown?

A. Correct.

Q. Now, if it should be determined, as a matter of fact, that the Railroad Company, even though they departed widely in producing ton-miles from the products you have indicated on Table No. 5, had not really been malicious or abused their prerogative but did that which was best to keep down the total expenses, do you still think that the litigation ought to be tested by the entitled-to table rather than the *was* table?

A. Undoubtedly it should; and in making this statement —which I have made pretty strong—I do not wish to be understood as intimating that any such arbitrary discrimination against either class of freight exists.

Q. No, you don't charge that they did do this?

A. Not at all.

Q. And you don't think that they did it before the rate-law—either rate-measure was passed?

A. I have no reason to assume that they did so at all.

Q. Now, we will pass to Table No. 7 temporarily. I want to ask one question before I leave No. 6. The result of your computations depends upon the data in 5, does it not, the entitled-to table?

A. In 5 and in 6-A, yes, sir.

Q. But the basis of division and the problem of division

of cost are all found in Table 5, practically?

A. Practically, yes, sir.

Q. 91 per cent?

A. Yes, sir.

Q. That leaves it within the power of the tabulator in making his "entitled-to" table to foreshadow exactly the result, does it not, in relation to it?

A. You mean by that that he could not—?

Q. I free you, as you do the Railroad Company; I don't say you, Mr. Hillman, but now we are speaking of the power, the man who makes the entitled-to table (which is the key of division of 91½ per cent,) has the power, being so minded, to foreshadow the result before he begins, by a system of percentages?

A. How am I to understand what you mean by "foreshadow"?

Q. Control it.

A. To control it?

Q. Yes.

A. By manipulation in making up Table No. 5 and not putting it on the actual basis, he would have very great opportunities for controlling the final result.

Q. Yes, sir, and if he was wicked or biased and prejudiced or partisan, he could absolutely control this division, couldn't he, because there is the key to 91½ per cent of it?

A. Yes, sir.

Q. I don't mean to imply that you did that at all.

A. I don't understand it so.

Q. Can any man tell what service freight is entitled to unless he knows how much of it is offered for transportation at various places and various times, as a practical railroad matter?

A. Yes, sir.

Q. Can any man take the year's tonnage without bearing

in mind the dates and the times and the places when it was offered for transportation, taking the tonnage for the whole year, sit down and make a train schedule of what stuff is entitled to?

A. He certainly can.

Q. Can he tell how many trains he will need in October if he has the totals of the year and not know the time when it was presented?

A. Do you mean forecast it from that?

Q. No, he has the statistics; he sees what tons were moved, what ton-miles were moved, the total for a year—we will take some example obvious; do you think from that basis, without knowing when and where the stuff was presented and in what volume, that you could make a train schedule for October or any other month?

A. Looking backward?

Q. Yes, not being on the ground when the stuff comes in; that is what I mean.

A. We are dealing in a spread there, future and past, it seems to me.

Q. I didn't say anything about the future.

A. You ask if he could make a schedule?

Q. Yes.

A. And that implies the power of future action, but I don't want to be technical about it, but if I understand your point—

Q. Be sure to state an answer, Mr. Hillman, that you will be satisfied with.

A. Yes, sir; a table of that kind could be prepared from the basic papers from which Table No. 5 is compiled.

Q. From the data mentioned in my question?

A. You could not make a schedule from the consolidated Table 5; a schedule could be made up for October or any other

month by the use of the data from which Table No. 5 was prepared.

Q. Did you do it?

A. I did not.

Q. Why?

A. It wasn't necessary at all.

Q. Let us have a thousand tons moved one hundred miles—a division—by through and local trains; it comes at you one hundred tons a day, running through every day, for ten days; let us assume that state of facts. Now, let us assume another state of facts: that it comes at you five hundred tons per day, would the cost be any different, or the entitled-to service any different?

A. The entitled-to service that is mentioned on Table 5 would make no distinction between that state of affairs with the presentation of 100 tons or 500 tons per day.

Q. Would the cost be any different in the two instances?

A. Very little, sir. It might make some slight difference, but not to any extent.

Q. Does density of traffic or increase of trainload make any difference?

A. Yes, sir.

Q. Well, then, if you have five hundred tons in a train or a thousand tons in two trains, transported all in two runs, is there no difference in cost per ton per mile than if you ran ten trains on ten different days to do that same business?

A. Oh, yes, sir, decidedly.

Q. That is what I intended to have you understand by my question. I probably didn't make it clear.

A. I didn't understand that.

Q. That would make a very great difference, wouldn't it?

A. It would make a difference on the loading of the train, on account of the wages of the train crew.

Q. But it would not appear in your "entitled-to" service;

it would appear there just exactly the same no matter which way the business was presented for movement, wouldn't it?

A. Yes, sir.

Q. And if it was moved in the ten trains and there were some of it state and some of it interstate, your entitled-to Table No. 5, which was made up without regard to the conditions, would be the key for the division between the two, would it not?

A. Yes, sir.

Q. And that would be a key for the division of the total cost of the ten trains, wouldn't it, the actual cost of the ten trains for the train movements?

A. Yes, sir. You must remember one thing, that the absolute cost,—you are now attempting again to apply Table 5 to the absolute conditions, which I always will object to. You did move the freight, and as you moved the freight, I have, subject to the objections which you have made, showed the cost between the through and the local trains of the actually appearing conditions. So I cannot agree, having once settled those absolute operating conditions between through and local, that you shall again revert to Table 5 and attempt to re-apply those operating conditions (which have already been taken into consideration) in the application of Table 5 to the result of the through and local trains.

Q. Just as far as it is necessary for you to do so, I would like to have you remind me of things, for the sake of having the record as you want it, but don't spend any time ordinarily on my account doing that, Mr. Hillman. Now, if the business was done by the two trains, as a matter of fact, Table 5 would still, under your theory, furnish the key, would it not, for the divisions?

A. Yes, sir.

Q. And also for the division showing the relation of ton-mile cost produced on through trains or local trains as well

as between state and interstate?

A. No, sir.

Q. It would not?

A. No, sir.

Q. It would not affect that at all?

A. Table No. 5 does not enter into the cost of through and local trains.

Q. Now, let us pass to Table No. 7. That table is the table where you apply your key to the total freight cost in Minnesota?

A Yes, sir.

Q. You apply the entitled-to data from Table 5 to the 91½ per cent and make the divisions there; that is, some data for one thing and some for another; that is right, is it?

A. That is correct.

Q. Now, let us pass to Table 8.

A. May I ask you one question, Mr. Butler?

Q. Yes, sir.

A. Are you going to examine me further on Table 7?

Q. Oh, yes.

A. All right then. I will pass over a statement that I was going to make, that I will make when the examination comes up.

Q. Tables 8, 12 and 15 relate to revenue, do they not?

A. Yes.

Q. 8 to freight revenue, 12 to passenger revenue, and 15 to the estimated losses by reason of the application of the rates involved in the lawsuit?

A. Yes, sir.

Q. Getting the amount of revenue of the particular business under consideration is the first natural step, is it not?

A. Yes, sir.

Q. And a very important one?

A. Very important, yes, sir.

Q. Tables 4, 7 and 11 relate to expenses and the division of expenses?

A. Yes, sir.

Q. The other tables are mere operating tables; that is—

A. Showing relations of operating percentages.

Q. Either keys or additional statements?

A. Yes, sir.

Q. Would it make any difference at all in your result if the interstate earnings attributed to Minnesota were doubled?

A. You mean without doubling the total?

Q. And the others remain as they are.

A. Total earnings in the state remain as they are?

Q. Yes.

A. And the inter to be doubled?

Q. Yes.

A. In the method I have treated it, it would make a difference in the operating expenses of interstate.

Q. How?

A. From the fact that the amount of traffic which I have shown as intrastate—

Q. I didn't mean the manner of it, I meant whether up or down, whether it would increase or diminish your local cost or the cost for local business.

A. No, I beg your pardon. I understood you to ask me would that increase the cost of the interstate or the intrastate,—which did you mean?

Q. The intra; would it affect the result at all?

A. If the intrastate were doubled?

Q. No.

The MASTER: Interstate earnings.

Q. If the interstate earnings attributed to Minnesota were doubled, would that affect the mark shot at here, to-wit, the cost of doing the local business?

A. Cost of doing the intrastate business?

Q. Yes.

A. Not in the method I have handled it, it would not.

Q. If the interstate ton-miles were doubled, would it?

A. At the expense always of the intra total business remaining the same in the state?

Q. No; the local business remaining the same, but you double the interstate ton-miles, what effect would that have upon the cost of doing the local business?

The MASTER: You mean intrastate business?

Mr. BUTLER: Yes, sir.

A. It would necessitate the complete revision of our tables from beginning to end, sir.

Q. I know, but what effect would it have—up or down? I don't mean the amount, but—

A. I don't know exactly.

Q. If the interstate ton-miles were divided by two, just half what they were during the period covered by your computations, what effect, if any, would that have upon the cost of doing the intrastate business that was in fact done?

A. That, as I stated before, in the case of doubling would require—

Q. I said dividing by two this time. You said doubling would not affect it; now I say divide it by two.

A. As I stated before, in the case of doubling the traffic, the division which you have just mentioned would require a revamping of the tables which have been presented in this exhibit, and I could not forecast the result.

Q. Couldn't tell whether it would increase or diminish the cost of doing the intrastate business, if the volume of the interstate business measured by ton-miles was divided by two; you so understood my question, and did you answer my question on that basis?

A. I understood your question, yes, that such a radical

move as you mention would necessitate such a change in expenses that I could not forecast the result till I had examined it and the corresponding records.

Q. Well, now, I didn't intend to ask you that opinion based upon any computations but I intended to ask it of you as an expert railroad man.

A. As a general proposition, then, sir, I should say that the doubling of the interstate traffic and the intrastate traffic remaining stationary, at the same figure, would, in my opinion, increase the relative cost of intrastate to interstate; and should the reverse be true, that the interstate was cut in half, the relation between intrastate and interstate would show the reverse; that is, the interstate would more nearly approach the cost of doing intrastate business.

Q. Now, absolutely, I meant. I didn't mean relatively, I meant absolutely. Do you understand now what I am at or the purpose of my question? I want the effect upon the cost of doing the intrastate business absolutely and not relatively; first, upon the hypothesis of doubling the interstate ton-miles, and next, upon the hypothesis of dividing the interstate ton-miles in two, taking the figures that you had for the year in question.

A. I should say that, in all probability, doubling the traffic would decrease the cost of handling the interstate; that halving the interstate traffic would increase its cost per ton-mile.

Q. Of the intrastate business?

A. Of the interstate.

Q. Of the intrastate is what I asked you. Now, the mark that you have to figure on here is to establish the cost of the intrastate business; we will assume that remained unchanged; and then assume, for the purposes of your opinion, the doubling of the interstate business measured by ton-miles of traffic.

A. The doubling would decrease the cost of doing both classes of business.

Q. Absolutely?

A. Absolutely, yes, sir.

Q. So the total operating expenses would not be as great under such circumstances?

A. Not as great per ton per mile; you cannot increase the volume of business without adding dollars to the amount which has been assigned to Minnesota. Of course, you understand that.

Q. Now, as to the net profits which you in your statement attribute to the intrastate business in Minnesota, would the increase of earnings on the interstate business affect that problem?

A. Yes, sir.

Q. How, up or down?

A. By decreasing the expense of intra it would increase the net earnings to take up interest and dividends.

Q. I didn't intend to speak of expenses at all in my question.

A. But you spoke of net earnings, did you not, sir?

Q. Yes.

A. That, of necessity, implies reduction of operating expenses.

Q. I will try that question again: Suppose the interstate earnings attributable to Minnesota in the year 1907 were to be increased—doubled, we will say—would that have any effect upon the net profit of doing the intrastate business? That is the point we are after here, the net profit of that business.

A. I was going to state that if the increase in revenue of which you speak came from an increase in rates, it would have no particular effect; if it came from the increase in volume of traffic, it would have an effect on intra.

Q. If it came from the method of division of interstate

earnings between states, what would the effect be on the net profit of the intrastate business?

A. Practically none.

Q. Would it have any?

A. Yes, sir; small.

Q. Up or down?

A. Down.

Q. Down. So then, if, by some improper or erroneous method of division of the earnings of the Northern Pacific Company between states, too much money was attributed to Minnesota as earnings of interstate business, that would reduce the profits resulting from doing the intrastate business; am I right in my understanding of your answer?

A. No, sir, it would slightly increase them.

Q. Slightly increase them?

A. Very slightly.

Q. Very slightly?

A. Yes, sir.

Q. Well, the degree of increase would depend upon the degree of excess of the division to Minnesota?

A. Yes, sir, but the total result, even for a large amount, would be very small, and yet, understanding the divisions which I have made, I can see where it would make a difference; but the difference would not be very large even for a large increase of traffic.

Q. So if you have made any mistake, or if any mistake has been made by you or the Company, and they have attributed to Minnesota too much interstate earnings, the effect of that is slightly to increase the apparent profit resulting from doing the intrastate business; am I right?

A. Yes, sir.

Q. So that made it necessary for you carefully to consider the basis of division of interstate earnings between states to see that there was attributed to Minnesota that which was

just and right under all the circumstances; is that not true?

A. Yes, sir.

Q. Did you so consider it?

A. No, sir; I accepted the allocation of the earnings to the state of Minnesota as made by the Northern Pacific, after doing as I did in the case of their operating expenses; having a statement from them of their methods I had some confidence in our friends' bookkeeping.

Q. Well, you then approved of their methods and not of their details?

A. Yes, sir.

Q. Well, now, let us assume the computations were made right; what was the method of attributing to Minnesota a portion of the interstate earnings of the whole line?

A. That was done, if my recollection serves me, (and I think it does,) upon the straight mileage basis. Not track mileage, I mean mileage of the freight handled.

Q. Are there other methods of doing it?

A. There are some where the line originating freight or the branch on which the freight originated is allowed constructive mileage,—which is another term for an arbitrary to that line as being the road of origin of a shipment.

Q. We are only speaking of one road now. We are dividing the earnings of one road, not of two roads.

A. It is frequently done that way on the branch lines of a road where it is desired by that road to show that such branches are paying propositions.

Q. Is that the right way to do?

A. I think not.

Q. If the branch is through narrow passes and extremely expensive and over deep gorges and high hills, with lines out of the state, and is comparatively short, and it costs five times as much to produce a ton-mile on the branch as it does after you get off the branch into the state in question, is it right to

allow anything to the branch for that condition of affairs?

A. There is a wide divergence of views on that point, but, in my opinion, no, sir.

Q. It isn't right. So then, your idea is that a division between state and interstate earnings should always be on the basis of mileage prorate?

A. Yes, sir.

Q. And that will apply to all roads under all circumstances?

A. Yes, sir.

Q. Have you looked at the report of the Commission—printing tabulations from the reports of the various railroads—to see how that method of division results in certain cases?

A. No, sir.

Q. You know how the "Q" road (which is the Chicago, Burlington & Quincy) is situated as respects Minnesota, do you not?

A. Yes, sir. They have, as I understand it, a very limited amount of mileage in the state and very heavy expenses in the state.

Q. So, dividing the earnings on the mileage prorate, as the Commission requires, and allocating the expenses to the state on the basis of the Northern Pacific's allocation to Minnesota, which you have approved, it appears by that report, to throw the "Q" road in Minnesota into an operating deficit of $6,000 per mile per annum. Now, you know generally the financial standing and reputation of the Chicago, Burlington & Quincy, do you not?

A. Yes, sir.

Q. Assuming the statement which I have made to be true, (and I am stating from recollection, but I think it is accurate) doesn't that suggest to you that there is something wrong with the method of division of earnings or of expenses as between states?

A. As to that point, of the division that should be allowed a state for the terminals within its borders, is a very vexed question.

Q. Well, all these questions are very vexed?

A. Very vexed.

Q. I am vexed at all of them and they are all vexed at me, I think, but I want to know what you think of that condition of affairs, whether or not the result doesn't show to the satisfaction of any open and candid man, that there is something wrong with the division of either the earnings or the expenses, or both, in an instance where the methods which you have approved for division are used?

A. Yes, that is an extreme case where it would seem as if some adjustment other than that which has been made would be necessary.

Q. Now, you consider it axiomatic, do you not, that the expenses per ton per mile decrease, other things being equal, with the length of the haul?

A. Yes, sir.

Q. And that the rates should so decrease?

A. Yes, sir.

Q. Now, then, on the division of interstate earnings on a line of railroad like the Northern Pacific, the mileage prorate business would, as it appears in this case, in many instances, attribute to state earnings or interstate earnings, at a rate per ton per mile higher than the maximum allowed for the shorter hauls in the state, would it not?

A. I haven't examined that; I wouldn't be in a position to say.

Q. Well, assume that to be the fact, that such cases in some instances (some of the extreme instances) go as high as 30 per cent, what do you say about that? Do you think that is a fair way to divide earnings between states?

A. Yes, sir, that is a fair way to divide earnings between states.

Q. Well, in such case, then, there is a large element of that in this case, is there not? You examined to find out, did you not?

A. I know that there is a large element of interstate business passing through the state which is divided on a mileage prorate, and that, also, from end to end of the road, those conditions you may say repeat themselves in such a method and such a way that there is little, if any, injustice done by that method of division.

Q. Well, now, take for example passenger business and division of passenger earnings between states; the maximum allowed by law for the haul in the state, which is about one-fourth or one-fifth of the interstate haul in the state, is two cents a mile; this mileage prorate of division means two and one-half and, in some instances, three, we will say, for the purposes of an example; is mileage prorate the right division?

A. Yes.

Q. What effect, then, if any, upon the net profits resulting from local operation? it all increases as you increase the interstate earnings by method of division of increase of rates or anything of that sort, doesn't it?

A. You mean appertaining to the state regardless of whether it is interstate or intrastate?

Q. No, no, the net profits, you have told us, resulting from doing the intrastate business, would be slightly increased by attributing to the state more than it ought to have on the interstate business by increasing the rates or by improper methods of division?

A. The increase would be very slight, and much less so in passenger than in freight; so much so as to be practically negligible in the passenger business.

Q. Now, if North Dakota permitted the railroads to, and

they did, make the passenger rate per mile out there four cents per mile, a division between Minnesota and the rest of the line on a mileage prorate would greatly increase the interstate passenger earnings attributed to Minnesota, wouldn't it?

A. If the rate was based on the sum of the locals, assuredly.

Q. Well, assume that. Do you think that that ought to, or that that in fact, would increase the profits of the Railroad Company for doing the intrastate passenger business?

A. It would, as I said before, to a very slight extent.

Q. Now, would it?

A. Yes, sir.

Q. You are sure about that?

A. I feel very sure, yes, sir.

Q. I am not asking you the extent.

A. Yes.

Q. Now, suppose that the Northern Pacific road doubled all its interstate passenger rates and the division was made on the basis of the mileage prorate, would it make one farthing more profit in hauling intrastate passenger business in Minnesota, on the present basis? Now, would it, Mr. Hillman, as an expert accountant and railroad man and logician?

A. If they doubled what, sir?

Q. Their rates.

A. If they doubled their rates?

Q. Their interstate rates.

A. No, sir, it would make no difference on that basis.

Q. Were you not in error, then, when you said increasing the state revenue would increase profits?

A. I stated in my method of coming to the profits it would slightly increase it.

Q. Yes, sir, and if your method shows that, your method is, *pro tanto*, wrong, isn't it?

A. Not necessarily, sir.

Q. All right, we will quit there. If it isn't, I can't reason. Adjourned until June 25th at 10 o'clock A. M.

FEDERAL BUILDING, St. Paul, Minn., Friday, June 25, 1909, the hearing was resumed at 10 o'clock A. M.

CONWAY W. HILLMAN,
recalled for further cross-examination, testified.

By Mr. BUTLER:

Q. Looking at Table No. 8, the first part of the table, as I understand it, (that is the part that is marked Subdivision A) is intended to show the earnings of the Northern Pacific Railway Company in Minnesota on intrastate freight business?

A. Yes, sir.

Q. Do those figures, to-wit, $2,075,514.99, show the true intrastate freight earnings for the year 1907?

A. No, sir; they still contain the error which we have spoken about so frequently.

Q. That is, it shows earnings derived from 14.83 per cent of all the freight ton-miles moved in Minnesota in the year?

A. Yes, sir.

Q. And that 14.83, as shown yesterday, is 20 per cent more ton-miles than the true ton-miles as disclosed by Mr. Johnson's examination for similar months at an earlier date?

A. Yes, sir.

Q. And if it be assumed that the error in earnings was of like per cent as the error in ton-miles, the figure which I have given you would be 120 per cent of the true intrastate revenue?

A. Yes, sir.

Q. This part of Subdivision A of Table 8 was based upon

the report of the Northern Pacific Company of its intrastate earnings to the Commission for that year, was it not, which was $2,800,000 odd?

A. Yes, sir.

Q. I would like to have you tell me now, in revenue, what per cent of the intrastate revenue, as reported, is the true intrastate revenue, arrived at on the assumption we have made, —which would involve the correction of your $2,075,514.99 by division by 120, as I follow the arithmetic.

A. Reducing the $2,075,514.99 shown upon table No. 8 to the basis which we have accepted shown in Mr. Johnson's figures gives us $1,725,375.61.

Q. By what percentage did you reduce that? I want it done on the basis of my question—which assumes that the percentage of error in revenue is the same as the percentage of error in ton-miles, 20 and a fraction per cent.

A. Using the figure which you mention of 20 per cent (which is a close approximation to the result which I obtain) gives me $1,729,579.

Q. That is, you divide the $2,075,514.99—?

A. By 120.

Q. Now, then, the percentage of error in the revenue between the true intrastate and the reported intrastate freight earnings for the year 1907.

A. It shows a difference of 16.87 per cent, as shown on my exhibit 3-L.

Q. What percentage of the total amount reported is the true intrastate, and what percentage is the interstate, which was eliminated from the report, is what I am trying to get at.

A. Of the amount which I have used on my Ex. 8—

Mr. O'BRIEN: Mr. Hillman, I don't think you understand the counsel's question. Mr. Butler asks you to state what percentage of the amount originally reported to the Commission by the Northern Pacific road for the year 1907, the amount

which you now find in answer to his question is the true amount.

A. The figures which you have mentioned this morning would show that 60.6 per cent, or, more accurately, 60.59 per cent, were retained in the computation of the earnings reported by the Road to the State.

Q. Retained in your Table 8?

A. No, sir, retained in the figures which you have given me.

Q. 60 per cent?

A. Yes, sir.

Q. Now, give me the exact divisions, on the basis that we have figured this morning, of the total reported earnings there were. What per cent intrastate—60 and a fraction?

A. 60.59.

Q. 39.41—?

A. 39.41 per cent, on the basis mentioned, was the amount which was taken out of the earnings reported to the State by the Railroad Company by the revision of the figures showing the accepted basis of intrastate.

Q. Now, you understood, did you not, that, as to the months Mr. Johnson examined, he got the true intrastate?

A. Yes, sir.

Q. And that intrastate earnings to the reported intrastate earnings, on the assumptions underlying your computation, should divide the same way as these divisions that we have made this morning,—should they not?

A. Practically, yes, sir.

Q. Absolutely, shouldn't they? They are both the true intrastate earnings and reported intrastate earnings?

A. Practically, yes, sir, because we have taken a very slight error in making your computation this morning by assuming the 20 per cent as being the relation when it only approaches very closely to that point.

Q. Assuming exact computations and assuming the verity of the assumption underlying the whole computation here, they should fit?

A. Yes, sir.

Q. Now, in this sheet that Mr. Johnson presented to the Master with Ex. 54 he did that thing, and I find that the Minnesota intrastate revenue, as truly divided, was 58.53, and the interstate 41.47,—which would make a variation involving a considerable amount of money, would it not?

A. Yes, sir, on those figures, it would.

Q. And your percentage, based on your computation, allows revenue to the intrastate earnings in excess of what Mr. Johnson's percentage would, somewhat?

A. Yes, sir.

Q. And that excess would all appear in the net profits on the intrastate business, would it not?

A. Yes, sir.

Q. Now, taking the total of the class rates, the sheet that I have referred to accompanying Mr. Johnson's Ex. 54 shows that of the reported earnings there was truly intrastate earnings 55.97 per cent and interstate 44.03 per cent; using the average which you used and say as far as the class rate business is concerned, (it having been assumed to be the average in your computation), the apparent profit attributable to the class-rate business would be so much the more in excess, would it not?

A. I have not attributed anything to the class-rate business.

Q. No, but you treated it all as an average.

A. Yes, sir.

Q. And assuming that average to apply to the class-rate business is the only way it could be treated by the use of your tables, I suppose?

A. No, sir, you can't take part of your table there and

apply it to my average rate.

Q. No, let us assume that your table shows that the class rate is the average—there was 60.59; you see there is about a difference of 5 per cent?

A. If that assumption is made, certainly, sir.

Q. That would cut down the net profits that much on the class business, if it be considered the average as you have done it in your table, would it not?

A. Yes, sir.

Q. By the way, have you ever tested to find out whether the ton-mile percentage corresponds with the revenue percentage of error?

A. No, sir, I have not seen that table of Mr. Johnson's, and haven't tested it in any way. Before I should wish to go into that, I should, of course, wish to test that table.

Q. One of the underlying assumptions of your computation is that the ton-mile error is the same as the revenue error?

A. Yes.

Q. Now, referring again to this same table and again to the merchandise and class rates, Mr. Johnson's computations on which his Ex. 54 was based, show that of the amount reported as intrastate 44 per cent in ton-miles was intrastate and 56 per cent interstate; the revenue substantially reverses, being 55.97 intrastate and 44.03 interstate. Now, in so far as is the assumption that ton-miles and revenue errors were of like per cent affects your result, assuming these figures that I have given you from Mr. Johnson's table to be true, would again, to that extent, affect the result or net profit attributable to the intrastate class-rate business, would it not?

A. Yes, sir, as I stated frequently, the change in any of the factors would affect the final result.

Q. Now, can you tell, from your own familiarity with the methods that you have followed, what effect that would have as respects the class-rate business, less than half of the ton-

miles being intrastate (44 per cent) and about 56 per cent of revenue being interstate? Would that increase or diminish the net profits attributable to the class-rate business, or are the elements so numerous and involved that it is not easily ascertainable?

A. It is not easily ascertainable without a computation.

Q. It depends a good deal upon the amounts divided by these various elements in Table 5, does it not?

A. Yes, sir.

Q. And you can't say with certainty, from the facts I have given, whether it would increase or diminish the net profits attributable to that business, can you?

A. No, sir; perhaps not best to give an opinion on that without working it out.

Q. Reserve that, if you will.

A. I would prefer to reserve it on that basis.

Q. Now, on your Table No. 8 you have shown by the figures that you there use 72.64 of the reported earnings on waybills was intrastate?

A. Yes, sir.

Q. And many of your divisions depend upon that, do they not, as to the verity of the computations?

A. Some of them, yes.

Q. Division between costs of state and interstate; that is true, is it not?

A. I do not find from running over this now that that enters into the division between inter and intrastate expenses.

Q. If there is any element or item of cost divided between state and interstate on the basis of revenue net earnings or gross earnings, or any combination that involves the idea of revenue, this error would affect the result, would it not, of the division on Table 7?

A. Yes, sir.

Q. And in each such instance would attribute more than

the truth to intrastate cost?

A. Yes, sir.

Q. Do you say that the element of revenue does not enter into any of the divisions evidenced by your Table No. 7?

A. It does not enter into the division between inter and intrastate.

Q. What elements outside of those disclosed on Table No. 5 do enter into that division?

A. The handlings of the freight and the element of the switchings and certain allocations.

Q. And there are no direct allocations between state and interstate?

A. There were a few, amounting to only, I think, $35 in the whole lot. It is negligible; and also an arbitrary, in one case, being allowed to intrastate in traffic expenses.

Q. In your division between freight and passengers, however, you did use revenue, or elements depending upon revenue, to divide a very large and important number of items between freight and passenger?

A. Yes, sir.

Q. In which case you used the total revenue in Minnesota?

A. Yes, sir.

Q. In the division between freight and passenger on your Table No. 4, which does depend in large degree upon revenue or something else that depends upon revenue, the propriety of the division between state and interstate revenue is not involved at all, is it?

A. No, sir.

Q. But the propriety of division between states is, both state and passenger? Don't you see what I mean,—that you give to the state too much? your basis of division for this large number of items between freight and passenger is wrong; if you give it too little it is wrong?

A. I can answer that question "Yes, sir."

Q. And if the amount of revenue attributed to the state from interstate earnings, whether on account of rates on interstate business that are too high or too low by reason of a division, it works down through, does it not, and affects the final result, because you make your division of freight and passenger on that basis? isn't that true?

A. Yes, sir.

Q. Now, the next item on Table No. 8 is 72.64 per cent of $22,914.72; that is for the purpose of determining the amount of refunds on account of overcharges and the like that should be deducted, is it not?

A. Yes, sir.

Q. And that assumes that the refunds should be—

A. In proportion to the business done.

Q. —in proportion to the ton-miles done?

A. Yes, sir.

Q. There is no relation between the two, is there?

A. Not necessarily, as all of that deduction from the revenue might have accrued on either inter or intra. Without examination of the items it would be impossible to say.

Q. And if it accrued on interstate, that would show the net profit $16,000 more, would it not?

A. Yes, sir.

Q. It could be ascertained, could it not, by looking at the voucher making up the $22,000-odd what refunds were made directly and what were not?

A. Yes, sir.

Q. You didn't take the trouble to do that?

A. No, sir.

Q. Didn't think that $16,000 item justified the examination?

A. No, sir.

Q. What are the elements in this interline way-billing item of $387,443.17?

A. The elements in that are the interline way-billing, which includes what we would term the overhead business.

Q. Well, we will call it interline overhead business; there are two elements of error in it, interline overhead business and St. Paul business?

A. Yes, sir.

Q. Of the Chicago, Milwaukee & St. Paul business?

A. Yes, sir.

Q. Did you from the data on which you built up that item have the full year's earnings as to each of the three, the interline, the overhead and the Chicago, Milwaukee & St. Paul, or did you build it up, or any part of it, from the revenue for a given month or months?

A. Yes, sir, it was built up from the representative months.

Q. The whole of it?

A. Yes, sir; that is, the percentages of the representative months were applied to the whole year's business in order to determine the $387,443.17.

Q. Now, let us speak first, then, of what is properly the interline business. You had the total year's revenue on that, state and interstate, in Minnesota,—or did you only have, to start with, the revenue for April and October, the representative months?

A. I had the revenue for the year.

Q. So that element of it wasn't built up on the percentage basis, was it, from the representative months?

A. No, sir.

Q. You had the whole year. Now, the overhead you had of the whole year, didn't you?

A. I had the report of the totals for the whole year on the original erroneous basis, and the percentages shown by the different months were then applied to that in order to show the proportion which was applicable to the tonnage which I had considered.

Q. Now, on the Chicago, Milwaukee & St. Paul earnings, under that contract that has been referred to here, did you get the total for the whole year, or for April and October and build up the year from that?

A. The totals were built up in the same manner, using the factor of the tonnages as shown for the representative months and applying them to the total business.

Q. So if I understand, then, what is right about this, in dividing the earnings on interline billing, to correct the error you used the total for the whole year and assumed that the error in revenue was the same as the error in ton-miles, or did you not?

A. No, sir.

Q. What did you assume was the percentage of error in getting at that?

A. The error in revenue was very slightly different, according to the computation I made, from the error in ton-miles; that is, I assumed, in this case as I did in the other, that when we reduced the tonnage of the interline to the intrastate basis the average revenue on interline business applied to the reduction as well as to what remained in.

Q. Well, that is what I meant to ask you the first time I asked on that point. It is on the underlying assumption that the error in revenue was the same as the error in ton-miles?

A. Yes, sir, of interline revenue, both applied. The reason I answered in that way was I thought your question at first implied that it was all revenue.

Q. Oh, no, the revenue being dealt with.

A. Yes, sir.

Q. And the revenue from the overhead billing?

A. Was treated in the same way.

Q. The same way. That is, you eliminated the error by assuming that the percentage of error in that revenue was the same as the percentage of error in the ton-miles?

A. Yes, sir.

Q. Now, why didn't you treat the Chicago, Milwaukee & St. Paul earnings the same way—take the whole year and figure them out on the same assumption—instead of taking the earnings for those two months (April and October) and building up a year on the basis of the percentages?

A. I think that that is handled in the same way excepting that in one case I used a percentage and in the other I simply used a fraction instead of a percentage; I divided, in one case, and multiplied in the other by the percentage.

Q. No, but you started out in the first two cases that we have spoken of, the interline billing earnings and the overhead billing earnings, with the earnings for the whole year including the error, and corrected on the basis of percentage of error in ton-miles; in the matter of the earnings from the Chicago, Milwaukee & St. Paul you started out with the earnings for April and for October. I say now, why didn't you start the same way on this third class of earnings in this item that you did on the first and second, why didn't you take the earnings for the whole year and correct in the same way?

A. For the reason that in the examination of that I didn't consider it necessary to get the whole year's business in front of me, and, having but two months, I took the line of shortest resistance, which was simply to take my two months, and in that case to apply it; but the result would have been the same, as I have applied it in the same method I did originally.

Q. Well, do I understand you did it that way simply because it was the easiest way to do it?

A. Because the result was arrived at and was the same result that would be arrived at in one way as the other.

Q. Well, it would be arrived at in the same way as the other if these months were truly and strictly and exactly representative, wouldn't it, but if there was any variation about that, there would be a variation in the result, and to

get out of that as to the two larger items in the matter, you took the whole year, did you not, but now when you come to this third item you changed your method, and I want to know if there was a reason for that. Why didn't you do it all alike?

A. Because, as I have said before, it was the line of the least resistance, and on that basis, and on the basis which we have assumed right through this investigation that the months of April and October shall be typical and are typical of the business for the year. That objection which you make in this case would apply with equal force to any of the computations which have been made. Presuming, of course, that that point was well established, I have simply taken what was the most convenient method of arriving at the result. If I had taken the year's business and arrived at it, I would have arrived at the same result I did.

Q. How do you know?

A. Well,—

Q. Now, you say that you did that and found they came out the same?

A. No, sir.

Q. Then do you say the reason you did it this way was to save trouble?

A. No sir, I said that, from the nature of the method of handling, it is bound to come out on the supposition that figures and percentages will produce the same result, whether they are built forward or backward. That is the only reason for that division in that method.

Q. Well, as to the other business than the Chicago, Milwaukee & St. Paul, included in that interline item on Table 8, if, in truth and in fact the assumption was not justified, you could have very easily used the revenue for the same months that you built up your tonnage data upon, could you not, and avoided any chance of mistake on that ground? That is a place where the assumption wasn't needed, is it not, because

it was easier to use the revenue of the months in question?

A. I may be very dense but I don't understand the question.

Q. Let it go, then; I can't make it plain. Take the next item on Table No. 8. You attribute to the intrastate earnings $63,021.79 from switching; what was the total switching earnings in Minnesota for that year?

A. The total switching earnings, as reported to the State, were $225,343.40,—which I have explained in my direct testimony was the net result of the switching after deducting—

Q. —$40,000?

A. —$40,000 shown on Table 4 under head of No. 6 from the gross switching earnings.

Q. Well, but the gross switching earnings were over $265,000, were they not? That is what the Company did with its tools and what it got for doing it in Minnesota, wasn't it, over $265,000, instead of $225,000?

A. Yes, sir; that is correct. From which was deducted the expenses chargeable to that switching of $40,000, making a net result of $225,000 as shown upon Table 8 and as reported to the State.

Q. Why was the $40,000 chargeable to that earning any more than the expenses of any other item of business to get revenue was chargeable to revenue? The Northern Pacific paid to other people for doing switching, on its business to equalize the service of its customers, about $40,000, we will say; now, why should *that* $40,000 be subtracted from what has been paid it for operation of its own plant in switching when you are trying to find the gross revenue attributable to operations in Minnesota in the local freight business?

A. For the reason that in the switching business the net result of the switching was the item at which we desired to arrive.

Q. That is, its net profits on switching?

A. Yes, sir, its net revenue on switching.

Q. But all the other items of revenue on Table No. 8 are the gross revenue from the operations in question?

A. Yes, sir.

Q. Why shouldn't you subtract from those certain things to get at a kind of net, the same as you did in the switching?

A. There would be no difference in Table No. 8 if we did enter the $225,000 gross revenue, and deduct therefrom the $40,000—

Q. You misspoke yourself, you said 225, it should be 265?

A. Yes, sir, $265,000 revenue, and deduct therefrom the $40,000 expenses, and show the $225,000 as a net result, which would be just as we have shown it on Table No. 8.

Q. Yes, but my point is, if the Northern Pacific received $265,000 for switching in this state with its own tools, when you are building up a statement of revenue for operations in this state why shouldn't you use that and why should you subtract from that $265,000 $40,000 that it paid somebody else for doing something for it any more than you would subtract from freight revenue or straight way-billing what the Northern Pacific Company paid to other companies?

A. The only reason for that is, as I said, it was ordered so reported by the State, that the net should be reported to them as switching, and in the total result it would make no difference as to the amount applicable to the net earnings whether I deducted that special item of expense from the total switching before considering it as an earning later on and included it in my expenses; the net result would be the same, and for that reason I saw no reason why I should not deduct it before making the division, as both the gross expense and the net would be divided upon the same basis in the final computation.

Q. It wouldn't make any difference, then, whether you put the $265,000 in there or not?

A. It would be a simple matter of conservation of the form of the statement and not interfere with the practical results.

Q. Well, now, this $40,000 was paid out by the Northern Pacific Company, was it not, to other companies that did switching of its business?

A. Yes, sir.

Q. Switching charges absorbed to put it on equality of service with competitors, isn't that right?

A. Yes, sir.

Q. Now, the $265,000 was money that it received and went into its treasury for switching service done in Minnesota, was it not?

A. Yes, sir.

Q. Now, have you stated fully your reason for subtracting from what it received what it paid to other companies on account of switching? Have you stated that clearly and fully to your own satisfaction?

A. Yes, I have.

Q. You bear in mind, do you,—at any rate, is it a fact that the $40,000 deducted is no part of the expense of earning the $265,000 from which it is deducted? Do you bear that in mind?

A. Yes, sir.

Q. And it is not related to it any more than would be lawyers' fees, is it?

A. Only related to it in the way that part of the switching the Northern Pacific did itself and received some money for; on the other they got somebody else to do it and paid them some money for doing it instead of doing it themselves; that is all.

Q. But as to the $265,000 in earnings, this $40,000 that it paid out to other companies has no more relation to the

services rendered to get that earning that a lawyer's fees in New York has, has it?

A. There might be, probably is, some portion of the money which they paid out in the $40,000 expenses included in the $265,000 earnings; that I could not say without reference to the, you might say their switching earning abstracts, which I did not think necessary to look into.

Q. Now, isn't it true that of the $265,000 switching earnings a large amount comes from work done for other companies?

A. I should judge that there was a considerable portion.

Q. No part of which, either in cars or tons or ton-miles, enters into the statistics of the Northern Pacific Company or your tonnage statistics on Table No. 5?

A. Yes, sir.

Q. So then, so much of that amount of earnings has no relation, has it, to any subject here in litigation for the movement of any freight which would be included in the schedules-of-rates question in this litigation?

A. Yes, sir, for the reason that the expenses of doing this switching, the fuel burned, the switchmen's wages, are of necessity included in the Minnesota operating expenses and have been distributed to inter and intra in my distribution of the expenses; and for that reason it has a place in this table on a proper proportion of the earnings assignable to intrastate because of the fact that I have just mentioned that intrastate has stood its share of those expenses of necessity.

Q. What part of the profits of this item in $265,000 switching earnings, that was done respecting traffic that would not be covered by schedules or rates here involved, have you brought into your net profit?

A. That would be the $63,000, less whatever proportion of operating expenses it cost to do that. That I do not know.

Q. So you cannot tell whether two-thirds or one-third of

the moneys earned by this Company for switching for other companies of traffic not moving on its line and which would not be covered (as far as it is concerned) by the schedule of rates in question is the operating factor, can you?

A. No, sir.

Q. But you took it in and assumed that it would have as much, (and no more) profit as the average of all the rest, did you not?

A. I assumed the entire earning, for the reason that the entire expense was necessarily mingled with the expenses which I have considered.

Q. And inseparable from them?

A. Practically so, yes, sir.

Q. Cost-accounting systems won't reach the cost of doing switching of the Northern Pacific road for other companies—and it must be assumed that all switching earnings yield a like percentage of profit as the earnings on some other line of its activities?

A. As I have said before, that should it be necessary to go into the refinements of cost accounting to the extent which you mention, the amount of expense assignable to switching for other companies and switching for the Company's own business could be ascertained. It has not been in this case, and therefore I said it was impossible of determination. I did not mean by that that it could not be done, but I meant by that that it had not been done nor were the data at hand to do it.

Q. Mr. Hillman, in getting your division of the $225,000-odd switching to the state and arriving at your $63,021.79, you used 27.967 per cent?

A. Yes, sir.

Q. What is that percentage?

A. That is the percentage of carloads inter to carloads intra.

Q. Is it tons or carloads?

A. Carload tons.

Q. And not the number of cars switched. Now, in your final computation you included in your operating expenses of Table 7 the cost of doing this switching, didn't you, or you started out to divide by the switching cost in the state?

A. Yes, sir.

Q. And you attributed to interstate earning only 20.06 of the switching expenses; isn't that right? I mean of the total operating expenses (I misspoke myself). Not of the switching expenses but the total operating expenses 20.06 attributed to the state business.

A. I assume that that is the correct percentage, yes, sir.

Q. That would be simply getting at the percentage of the total?

A. Yes, sir.

Q. So that you gave something like 7.9 per cent more of the earnings from this switching to the intrastate side of your account than you did of the expenses attributable to it?

A. Yes, sir, as there are a large number of the expenses mentioned in Table 7 which have no relation whatever to the switching.

Q. The carload tons on which this division was made,—was that carload tons that were switched incurring this expense or carload tons that you didn't examine at all?

A. The carload tons, or the number of cars which were switched, I did not know.

Q. You didn't know the tons in the cars?

A. Nor the tons in the cars.

Q. Nor whose cars they were, nor on whose tracks the switching was being done?

A. No, sir.

Q. But you assumed, wherever they were, whosever they

were, that, on the average, they were the same as those that you did examine?

A. On the average that the switching would accrue upon the carload ton basis.

Q. Well, we will assume one car has in it ten tons and another car has in it forty tons, it would be attended by the same expense in switching, wouldn't it?

A. Practically, yes, sir.

Q. And it would be a good way to divide on the number of cars instead of charging four times as much for one car as for the other, would it not?

A. Well, if I had had the car basis available I would have used it instead of the ton basis.

Q. You had the car basis on Table No. 5, hadn't you, state and interstate?

A. Yes, sir, but the cars switched I did not have on No. 5.

Q. You had the tons on No. 5, didn't you, but not of the cars switched?

A. That is correct.

Q. You didn't have any statistical information at all with respect to the cars or the loads or the empties that were switched in incurring this expense, did you?

A. No, sir.

Q. None whatever?

A. No, sir.

Q. But you took from a tonnage table relating to other business your tonnage on Table 5 (certain tonnages) and made the division, and on Table 5 you had carload division separated in the same manner, between state and interstate as the ton division, and you took the tons instead of the cars; why wouldn't it be just as well to take the cars with No. 5 as the tons with No. 5? neither had anything to do with it.

A. There are no cars on No. 5.

Q. No carloads?

A. I did take the carloads, sir; that is just what I did take.

Q. The carload tons I thought you said.

A. That is it, the carload tons, yes, sir; I have no carloads on No. 5.

Q. You have number of carloads, haven't you?

A. But if you will note, the number is the heading there.

Q. You haven't the carloads?

A. No, sir.

Q. Carload tons?

A. Your carload defines the nature of the rating; you might say that it is in carload lots and the tons show above.

Q. And you never did get at the number of cars that were used to do the Northern Pacific business in Minnesota for carload business or for less than carload business?

A. No, sir.

Q. Or make any assumption as to the average loading?

A. Yes, sir, in some of my divisions I have assumed the average loading (as stated by Mr. Gray) to be seven to one as regards a less than carload to a carload.

Q. Your computation assumes, except in that single instance where you use the seven to one for the purpose of division, equal carloading between state and interstate business?

A. Yes, sir.

Q. Between through and local trains?

A. Yes, sir.

Q. As to all commodities?

A. I haven't attempted any division as to commodities, sir.

Q. No, but your underlying assumption upon which these computations are based assumes equal carloading as respects state and interstate, as respects through and local trains, and as respects coal and grain, livestock and lumber, shingles and dry-goods, fruit and farm machinery?

A. Yes, sir.

Q. Now, that is not true, is it?

A. No, sir.

Q. That is very wide of the mark indeed, isn't it? Any experienced railroad man that would start to operate his railroad on the assumption that in state and interstate business on through and on local trains and in respect to all carload classes each car would have the same weight, would make a very grave mistake, would he not,—that it would haul the same amount?

A. It would be an error; how grave I wouldn't be able to tell.

Q. Well, he would be a fool, wouldn't he?. It isn't so that it ever happens, is it?

A. That the average loading of each commodity is the same?

Q. Yes.

A. Oh, no, sir, certainly not.

Q. And your whole underlying assumption is that there was the same train loading, as between through and local trains, is it not?

A. No, sir.

Q. But constantly the same loading of each kind, the same one day as another, and one month as another, of the through compared with the through, and of the local compared with the local?

A. No, sir.

Q. You took the actual upon that?

A. Took the actual on that, day by day, as the basis shown here.

Q. As the basis of Table 6?

A. 6-A.

Q. Now, in so far as your assumption of equal carloading of the various classes of business divided between through and

local trains and between state and interstate business is wrong, your final conclusion is wrong, is it not?

A. So far as the average loading of the inter or intra might be excessive or under, yes, sir.

Q. How about through and local trains?

A. On through and local trains, if you will recall, in Table 6 we have taken what we assumed to be from the conductors' report actual weights.

Q. I am referring to Table 5. In so far as your entitled-to table (which is the key of division between state and interstate of 91½ per cent) erroneously assumed equal carloading in like trains between state and interstate business, just that far your division is affected and consequently your result is wrong, is it not?

A. Table No. 5 shows the actual weights which were handled in carload lots and less than carload lots. Inasmuch as the intrastate or the interstate might require more cars allowed that carload, by that much the result would be affected on account of the extra cars required, and in that extent I will say yes to your question.

Q. That is, to the extent that it works into the divisions, this being the key to the division, and to the extent that that assumption of equal carloading of all commodities in like trains as between state and interstate is the same—as far as that assumption is wrong your conclusion is wrong, so far as that element enters into the divisions?

A. So far as it affects it, yes.

Q. And it is, is it not, in your judgment, an assumption that is not justified in truth or in fact, when you compare one commodity with another on like trains, between the state and interstate business?

A. No, sir, I think it is justified.

Q. You think that, as a matter of fact, they haul as many tons of livestock as they do of grain?

A. Oh, if you come to the division between commodities and those, I will—

Q. You say it is absurd and worthless, do you not?

A. No, sir, I do not; I say I have not investigated that part, nor is this intended to do so.

Q. Well, if you assumed the minimums to be used which are prescribed by the orders and the acts of carload business, there is more spread in minimums, is there not,—ranging from what? (Speaking to Mr. Staples) fifteen tons to thirty or thirty-five? what is the lowest minimum?

Mr. STAPLES: Fourteen to forty.

Q. The minimums prescribed by the act in controversy here range from fourteen, as I understand it, to forty tons, between different commodities or combinations, carload lots. Now, to assume as a fact that carload business moves equal loading to a car as between commodities, is absurd isn't it?

A. That would not be sustained by the facts in the case.

Q. No, it is absurd; you will go to that extent?

A. I wouldn't care to characterize it as that, no, sir.

Q. And in so far as such an assumption is an essential ingredient in your computation in this case, just to the extent that that affects the result, the result is wholly worthless, is it not?

A. To the extent that it affects it, yes, sir, the result is incorrect. You must remember, at the same time, that you are leaving out of account the fact that on those minimum carloads of which you speak your rate is greater in each case and that where you would have to consider that element in the expenses of hauling you would have to offset that by your higher rate and the more that you receive for your service; and if we would, as you have suggested, go into that commodity business and the difference in the commodity-car rates, I should most assuredly require, as one of the factors to determine that matter, the amount earned per ton per mile

upon those commodities; and it is safe, therefore, in my opinion, to assume that whatever differences might occur in the expense of handling owing to the lighter loading would be practically offset by the greater earning of that lighter loading. That would be a matter where the law of averages could be fairly assumed, and I have so assumed it.

Q. Oh. Then your assumption is that with this lighter load it yields more revenue per ton per mile, and therefore the assumption does not affect the result injuriously on the average; is that so?

A. On the average, the law of averages as between inter and intrastate where these matters would occur,—that the law of averages would practically offset that. Now, when I say that it would practically offset it, I do not mean that it would absolutely offset it. It would have to be a matter of investigation, as you suggest, between commodities.

Q. Table No. 5 was prepared for a division of cost between state and interstate, was it not?

A. Yes, sir.

Q. It is the key for that division?

A. Yes, sir.

Q. Do rates affect cost?

A. No, sir.

Q. Does revenue affect cost?

A. Not in this application, no, sir.

Q. Does classification affect cost?

A. No, sir.

Q. It has nothing to do with it, has it?

A. Nothing.

Q. And as far as this division is concerned, it is not affected by an element of revenue at all except $35, is it?

A. That is all.

Q. Then how can it be that it makes any difference what the rates are or what the revenue was, or what the classifica-

tion was, as far as the use of Table 5 for a division between state and interstate business is concerned?

A. None, sir.

Q. None whatever. Then, in view of your last answer, does that not make your answer applying the law of averages irrelevant wholly?

A. I had understood your question to go a little deeper than the application of Table 5 and therefore answered it in that way. However, I will say, with reference to Table No. 5, that in each of the divisions of these tables all classes of commodities enter into state, inter and intra, through trains and local trains, and as far as that application would go, the law of averages would still hold for that table and would be fairly equitable.

Q. That is, do you now say that the assumption of equal carloading of one commodity compared with all the others, of state and intrastate business, in like trains, is or is not in Table No. 5?

A. There is no assumption in Table No. 5 of equal carloadings, as the total amount of the loading is mentioned there regardless of the number of cars.

Q. Does the assumption which I referred to in the last question underlie any element in any of your computations?

A. Yes, sir, as I understand your question, as I said a few minutes ago, by the number of cars used in that, it would affect the application of this table to the cost.

Q. Does not the same assumption extend to different commodities on both through and local trains as well as state and interstate business, and is that assumption not one of the underlying assumptions upon which some part of your computation depends?

A. As I have handled this matter, I should say that that source of error has been eliminated from the computation.

Q. The one stated in my last question?

A. Yes, sir; for the reason that I have not gone into the commodity business at all, and have set these tables up as on a basis to eliminate that error.

Q. Now, it is the time of adjournment—I will ask you if you are sure that your last answer is right, or if it is a mere impression.

A. Well, I would like to consider that for a moment or for a few minutes and look it over and see how far that would affect the result.

By Mr. O'BRIEN:

Q. In your computation have you made any attempt to ascertain the cost of any particular commodity?

A. No, sir.

Q. Is there, therefore, any assumption in that table with regard to the cost of any particular commodity?

A. There is not.

The MASTER: That is, the cost of transportation?

Mr. O'BRIEN: Cost of transportation, yes.

Q. The great underlying assumption as to the cost of local business is that the cost of the local business on the main line is the same as the cost of all business upon the branches, is it not?

A. Yes, sir.

Q. And the principal object of Table 5 is to ascertain the amount of local tonnage upon the System in Minnesota and the amount of through tonnage?

A. Yes, sir.

By Mr. BUTLER:

Q. Did you not assume that the cost of producing a ton-mile in any commodity by local trains on the main line was exactly the same as of producing a ton-mile of any other commodity under the same circumstances and over the same place?

A. Yes, sir, the freight was treated as an entirety, and no consideration given to—

Q. As homogeneous in cost as well as homogeneous in carloading; homogeneous in cost of conducting the service performed by the Railroad?

A. Yes, sir.

Q. That it cost precisely the same (is your underlying assumption) to produce in carloads a ton-mile in hauling the first-class as it did a ton-mile in hauling the lowest possible grade of freight on the road in through trains on the main line or in local trains on the main line; the only division was between the class of trains doing the service?

A. That is correct, sir.

Q. Now, is it not absurd to assume that the cost of railway service in producing a ton-mile in hauling a carload of the first class in a local train over the main line is the same as producing a ton-mile in hauling a carload of soft coal or grain in a local train over the same line at the same time?

Mr. DURMENT: If that question is in the case, it is for the Court, isn't it?

Mr. BUTLER: Well, I am entitled to an answer to that question.

A. As far as the train movement goes, the cost of hauling a ton does not vary.

Q. Of producing a ton-mile of revenue freight?

A. A ton-mile of revenue freight does not vary.

Q. Now, your last answer intended to limit that, did it not, to train movement cost?

A. Yes, sir; it is so stated.

Q. So then, you hold that the train movement cost of producing a ton-mile of service is the same in all classes of freight and kinds of commodities, do you not, and are not your figures and computations based upon that assumption, too?

A. They are based exactly on the assumption that neither

engine, fuel, nor crew expend any more energy in moving a ton of freight—

Q. Revenue ton of freight,—do you mean that?

A. No, sir, I mean moving the train weight,—than they do with the other. And with the further statement (which I make so that you may not misunderstand me) that the average of the carloading will even itself up on a large amount of traffic. I add to the statement that, per ton per mile—

Q. Revenue per ton?

A. Revenue freight,—the cost is practically the same on the lines of the road.

Q. Northern Pacific. Now, that there may be no misunderstanding as to what is meant by your answer, does it mean this, to-wit: that in local trains the train-movement cost for producing a revenue ton-mile of freight of the first class is the same as producing a revenue ton-mile of freight of the lowest class?

A. No, sir, it does not.

Q. Do any of your tables or computations, as far as train-movement cost is concerned take into account any difference in cost in producing a revenue ton-mile of freight of one commodity as compared with all the others?

A. No, sir, it does not.

Q. Then, your computations are upon the assumption that the cost is the same?

A. That the average cost of moving freight. When you interject into that the matter of comparing the cost of moving a first-class tonnage against a low-class tonnage,—the low-class tonnage generally has a larger loading, you understand, and therefore I cannot allow the application in that form of my statement. But I can say that, because of the fact that on these different trains and on these different branches first class, second class, third and commodities are moving, I have (and have a right to), treated them as moving at the

same rate per ton per mile. If you attempt to classify, I should then, before I answer, have to take those things into consideration.

Q. And you haven't taken them into account at all, have you?

A. I have not.

The MASTER: Is that answer predicated on the doctrine of averages?

WITNESS: Yes, sir. That if I would excerpt any one class of freight from that, I would have to revise my whole tables on the basis of carrying first class, which, as a general thing, moves in lighter trainload lots than the other classes of freight. But on the average of traffic, it is on the basis that the average of traffic holds itself in both classes, which, if we should prove that our traffic was not homogeneous, on that account we would have a different basis to go on.

Adjourned until Monday, June 28th at 10 A. M.

FEDERAL BUILDING, St. Paul, Minn., Monday, June 28, 1909, the hearing was resumed at 10 A. M.

CONWAY W. HILLMAN,

recalled for further cross-examination, testified:

By Mr. BUTLER:

Q. There were some matters that you were to look up for us.

A. Yes, sir; I haven't got those tables prepared yet.

Q. Which tables do you refer to?

A. That you spoke of the other day, the first set of tables. Perhaps you had better speak of them in detail; those tables I made a note of.

Q. I think I asked you for the amount or the percentage of the total expense that was divided territorially and at-

tributable to the state of Minnesota on an arbitrary basis.

A. Yes, sir; I haven't got that statement as yet.

Q. And I think you were to give us the intrastate freight revenue for April and October, both with and without the error.

A. Yes, sir; I haven't figured that as yet, either.

Q. I think you were to give us the net profits on the miscellaneous passenger earnings, so-called, and like information touching the freight earnings.

A. Yes, sir; I haven't that.

Q. Look at Table No. 12. Included in the amount of the total on that table are certain earnings derived from the transportation of mail, express, excess baggage, storage, sleeping cars, special trains, dining and observation cars, operation of lunch-rooms, lunch-stands, and newspaper sales?

A. Yes, sir.

Q. The method of division of the earnings which I mentioned in my last question between state and interstate is wholly arbitrary, is it not, as to each of these items?

A. No, sir; the express is allocated to the inter and intra by the Railway Company.

Q. How?

A. I do not know what method they pursued in making that allocation. I accepted their allocation for it.

Q. Didn't determine whether it was on a sound basis or not?

A. No, sir; I did not go into the question at all, except that their allocation is shown on their report.

Q. Well, what do you say of the other items?

A. Extra baggage and storage is allocated by the Company—

Q. How?

A. —and their allocation is accepted. I do not know the basis of allocation.

Q. Don't know whether it is right or wrong?

A. I do not, sir.

Q. Well, how as to the other items?

A. Special trains are allocated by the Railway Company and accepted.

Q. How allocated?

A. I do not know, sir.

Q. And don't know whether it is right or wrong?

A. No, sir, I have accepted their allocation. In all these matters it is a matter which can readily be done, and so I assumed they had the information at hand for doing it directly.

Q. As to the other items?

A. Lunch-stands and news-stands I have taken directly as an intrastate earning.

Q. That is the earnings from lunch-rooms along the route where trains stop for passengers to get off and get something to eat; all of the gross earnings of such places you have attributed to the intrastate business?

A. Yes, sir.

Q. On what ground,—do not passengers of both classes leave their money there for services?

A. They do, but it is an item which so directly, from its nature, belongs to the state of Minnesota, that I have left it in intrastate.

Q. That is because the lunch-stands are in Minnesota, I suppose,—because they eat in Minnesota?

A. Yes, sir.

Q. How about dining cars? do you give to Minnesota all of the gross earnings derived from services rendered in the state of Minnesota?

A. No, sir.

Q. Isn't a dining car exactly like the lunch-stand except

that one is moving and the other is sitting on the right-of-way?

A. There is a distinction—

Q. What is it?

A. —between those items. The fact of the lunch-stand being an item which is absolutely located to the state—it serves the passengers and also other parties desiring something to eat—and on account of that difference in them I have drawn the line between the receipts of dining and observation cars and lunch-stands.

Q. How did you divide dining and observation cars territorially—their earnings?

A. On the basis of expenses.

Q. What has that got to do with it?

A. Because the expense of running the dining car would necessarily be included in the expenses which we have divided between inter and intrastate, and I have therefore divided the earnings on that basis.

Q. I don't quite understand that.

A. A dining car is a train expense, it is part of the operation of the road, and, as such, having no means of determining how many inter or intrastate passengers used this facility and to what extent they used it, it seemed to me to be but just that these earnings should be distributed upon the basis of the expenses which had been incurred in furnishing that facility to the passengers in the state of Minnesota.

Q. How did you divide the expenses of dining cars between state and interstate passengers?

A. The expenses of the dining cars between state, intra and interstate, would be included in the division of expenses as shown upon Table No. 11.

Q. How is that item divided on Table No. 11?

A. There is no such item, sir.

Q. It is included in some other item, is it?

A. It is included in other items, yes, sir.

Q. And how are the items divided, can't you give us the basis? In attributing revenue to Minnesota you make it follow expenses; now, couldn't you tell us, briefly, how the expenses were divided so we could find out how the revenue was divided?

A. That would necessitate my going over the division between inter and intra on Table 11, if you so desire.

Q. Well, we will not take time for that in this connection. Excess baggage how divided?

A. By the Railway Company.

Q. On what basis?

A. I do not know, sir.

Q. Storage,—that means the storage of baggage?

A. Yes, sir,—is allocated by the Railway Company.

Q. How?

A. I do not know, sir.

Q. Why isn't pay to a railroad company for storing a piece of baggage, that isn't taken away within a reasonable time in its depot in which a lunch-counter is situated, the same as the earnings of the lunch-counter, as far as state and interstate is concerned, and why didn't you charge all of the storage to Minnesota where the services are rendered; it is fixed, isn't it?

A. Yes, sir, but the reason I did not was that the baggage bears ordinarily a close relation to the passenger, being used practically following the movements of this passenger, that when the Northern Pacific did allocate that I accepted their allocation.

Q. Well, it doesn't bear any closer relation to a passenger, as between state and interstate, than does the matter of lunch that the passenger eats at a lunch-counter or on a dining car as he goes along making a trip, does it?

A. Yes, sir, I would consider that it does bear a closer

relation or enough difference to justify me in making the change.

Q. What amount is included in this item for sleeping cars?

A. The total amount is $55,895.92.

Q. Is that divided between state and interstate?

A. It is divided by me on the basis of expenses.

Q. What expenses?

A. The total expenses, inter and intra, as shown by Table No. 11.

Q. Where are those earnings earned?

A. In the state of Minnesota.

Q. For what?

A. For the use of sleeping cars.

Q. By passengers?

A. By passengers, yes, sir.

Q. On what division?

A. On whatever division the cars run, sir.

Q. Did the Northern Pacific, in the year 1907, collect a dollar from passengers for sleeping-car privileges?

A. Under the old contract with the Pullman company (I can't say what it is), they get a certain percentage of the earnings of that company; I think the same is in existence now.

Q. Did you find out where that $55,000 came from? Did it come from the activities of the Railroad Company in operation at all, or did it come from an investment outside of operation?

A. That earning of which you speak bears a relation to the travel of the Company, it is dependent upon that for the basis, even though its payment might be in the nature of a dividend or an earning upon the one-half of the Pullman cars, which I believe the Northern Pacific still retain.

Q. Can you point out in the operation costs of this Company (that you have so carefully analyzed which is set up

on your Table No. 4 and divided) any item that includes a solitary cent for the operation of sleeping cars to be set against this revenue?

A. No, sir.

Q. So, so far as operation expenses are concerned, this $55,000 does not cost any more to produce, does it, than the cutting off of coupons on bonds that the Company may happen to hold in its treasury?

A. Yes, sir; there would be certain expenses with reference to the hauling of a train where this expense would necessarily—

Q. Hauling of Pullman cars, you mean?

A. Hauling of Pullman cars, yes, sir.

Q. Well, do you think the Northern Pacific hauled Pullman cars in Minnesota for $55,000 or $155,000?

A. I take it that that is their net that they received for that service.

Q. Isn't it an income from investment in cars, pure and simple and nothing else, wholly unrelated to operation and not a cent of it derived from the traveling public? Isn't that the fact, Mr. Hillman?

A. I do not know, sir.

Q. Well, assume that it is the fact, that that is true, that simply adds $55,000 to the net profits of the Minnesota intrastate passenger business in the way you handled it, doesn't it?

A. No, sir.

Q. Well, $21,000,—that is divided?

A. $21,000, yes, it would add $21,082.26 to the revenue; and, at the same time, if that were considered as an intra which should be excerpted from the table, there would be an additional entry of what you might call other income to intrastate, of which intrastate would receive its proportion, and while the $21,000 might come from this table, there would

be an item later on in the income basis which would be applicable to intra.

Q. Well, did you carry this in your income account as profits from operation or as profits from investment?

A. As neither as a receipt.

Q. Yes, just the same as though it was a passenger ticket, didn't you?

A. Yes, sir, as a receipt.

Q. You treated this just exactly as though it was a passenger ticket?

A. As a credit to income, yes, sir.

Q. From operation?

A. Yes, sir.

Q. Now, none of these items making up the miscellaneous earnings in the passenger business are derived from any services the rates on which are in question in this litigation, are they?

A. None.

Q. And all of these items are used, are they not, as a basis of division of expenses, of some kind or another; so that the result is affected in two ways: first, by the apparent volume of net profit that was shown by including (if there be included) any items that ought not to be included, and, next, by including these items in your bases for division, so that the handling of these items as you have has a two-fold effect, has it not?

A. Yes, sir, I think that that item entered into the division between freight and passenger.

Q. But not between the division of the passenger cost between state and interstate; or did it?

A. No, sir, it did not.

Q. Do your computations assume that operating expense to earnings bears the same relation in carriage of passengers as it does in mail, baggage, storage, express, the sleeping-

car item and all other items of miscellaneous revenue?

A. No, sir.

Q. Different as to each?

A. Yes, sir.

Q. What was the operating expense for the United States mails?

A. I do not know, sir.

Q. For the express?

A. I do not know, sir.

Q. Excess baggage?

A. I do not know.

Q. Storage?

A. I do not know.

Q. Sleeping cars?

A. I do not know.

Q. Special trains?

A. I do not know.

Q. Dining and observation cars?

A. I do not know.

Q. Operation of lunch-rooms?

A. I do not know.

Q. Lunch-stands?

A. I do not know.

Q. Newspaper sales?

A. I do not know.

Q. Did you ever determine any of those to be other or different than the average operating percentage of operating cost to the gross earnings?

A. No, sir.

Q. Then in getting up your statement of net profits from the passenger activities, you take the average operating expenses as compared with the total earnings from all sources?

A. No, sir.

Q. Well, tell us how you avoid that.

A. The entire expenses of the operation of the road, including all the utilities which you have mentioned, are included in the amounts named upon Table No. 11 and there divided; therefore, all the expenses of operating these accounts, though they have not been segregated, appear in their entirety, or I might say are included in Table No. 11; and therefore, the use of this Table No. 12 is simply to determine how much of these earnings the intrastate is entitled to have been assessed with the proportion of the operating expenses.

Q. The average proportion of operating expenses, isn't it?

A. The total of the operating expenses.

Q. Well, let us assume that the earnings from United States mail intrastate was not enough to pay for hauling the mail, let us assume that to be the fact; if that were true, it would make the operating expenses chargeable to the carriage of passengers a lower percentage of the revenue derived from the carriage of passengers than the average which you have used, would it not?

A. If we excerpted that, yes, sir.

Q. On that assumption, I said. Now, let us assume this $55,000 here which is divided for sleeping cars, between state and interstate charging to state $21,082.26,—supposing, as a matter of fact, it didn't cost the Company a cent to get that money, that it didn't spend a cent in operating its road or maintaining its plant to get that money, would that not have the effect, if eliminated, of making the operating percentage to revenue higher and the apparent percentage of profit less?

A. In such a case, yes, sir.

Q. So that, unless the operating expenses by which these miscellaneous earnings were made bore the same relation to the earnings as earnings from the transportation of passengers bear to it, the result which apparently shows the net profit from transportation of passengers would be changed?

A. No, sir.

Q. Not at all? Suppose the operating expenses were 25 per cent, that for 25 cents spent it made on the average $1 in miscellaneous earnings; now, for the passenger revenue properly it takes over half a dollar, does it not?

A. Yes, sir.

Q. Now, when you handle them all together, would not that take the average of all and assume that the profit of all one line of activity from which these earnings were derived was the same as the other?

A. If such a statistic—

Q. If such was the fact?

A. If such a statistic was available and we had treated it with its earning and its operating expense separately, we would then have a different result for the passenger—you might say the regular passenger haul—but if when we had excerpted all those expenses in the method that you have outlined, determined their operation and the net result from each one, we would then come to the same totals, both of receipts and of operating expenses, as I have shown here and therefore come to the same net earnings.

Q. But you would attribute to the mail its profit and to the express its profit and assign to all the miscellaneous items, would you not?

A. Yes, sir; and it has been my intention in this to include all items but treating them as an average and not in detail.

Q. Now, if the passenger rates were changed, during the year that you made your computations, from three to two in the maximum—changed on the 1st of May—and your computation took in two months after the change, I suppose the change of the rates and lowering them and lowering the revenue derived from the business, would increase the operating percentage?

A. Yes, sir.

Q. But it would not affect the operating percentage of

any of the miscellaneous items at all, would it, and didn't?

A. No, sir.

Q. And it could not be true, could it, that the percentages were just the same in the miscellaneous side of this account and in the passenger side, as compared with operating expenses, the passenger rates being changed, and the mail rates, and the other charges in the miscellaneous account remaining the same?

A. It would not change those.

Q. And would change the passenger, wouldn't it?

A. It would change the passenger, yes, sir.

Q. So any assumption, as far as your investigation has gone, that the percentage of operating expenses to the earnings on the miscellaneous side of this account and on the straight passenger side of this account, is purely arbitrary, isn't it, and was made without any tests or justification whatever?

A. I have not treated that in the manner which your question would indicate.

Q. Well, my question don't indicate that you treated it, or didn't intend to. I said any assumption of that would be wholly arbitrary and unjustifiable, would it not, and no matter whether you made it or not?

A. The assumption that all the operating expenses of the utilities which you have mentioned are equal would be wholly unjustified.

Q. And it would be absurd, wouldn't it?

A. Yes, I would agree to that, if you wish to, or any other adjective you want to put in.

Q. Now, let us look at Table No. 4. By this table you decreased the amount of expenses attributable to passenger business in Minnesota, as compared with the Company's division, $418,517.04, did you not, or 19.26 per cent?

A. Yes, sir, that is the figure, and I think, if I recollect,

the percentage is correct; it is very close to 20 per cent.

Q. You didn't increase any item but one, did you, as far as the passenger was concerned, and that was $1,122.80, the proportion of operating expenses of terminals?

A. That and the item of outside agencies, under "general expenses," are the only ones we increased.

Q. But your general expenses you decreased in the total of $34,258.58, didn't you?

A. Yes, sir.

Q. Your station agents, clerks and laborers you decreased $26,762.90?

A. Yes, sir.

Q. Station supplies and furniture $3,288?

A. That is correct.

Q. Station supplies and furniture you decreased $3,288?

A. Yes, sir.

Q. Switchmen and watchmen you decreased $17,213.89?

A. Yes, sir.

Q. Telegraph expenses you decreased $21,968.95?

A. Yes, sir.

Q. Superintendence you decreased $17,498.34?

A. Yes, sir.

Q. You decreased the total of the transportation items $85,609.28?

A. Yes, sir.

Q. Maintenance of equipment and repairs and work cars you decreased $13,488.60, did you not?

A. I make that decrease $12,408.82.

Q. The total maintenance of equipment you decreased $21,141.12, did you not?

A. Yes, sir.

Q. Supervision of equipment and stationery and printing you decreased $7,652.52, did you not?

A. Yes, sir, that is my figure.

Q. Well, then, I think your answer in which you disagreed with my question and gave $12,000-odd instead of $13,488.60 ought to agree with our claim.

A. I overlooked the fact for a moment that you were using "Hillman No. 1," and I happened to be using "Hillman No. 2" at the time.

Q. "Hillman No. 1" is the one, isn't it?

A. Yes, sir.

Q. That is the one you used?

A. I used the other, but stated that I prefer No. 1, and it is practically No. 1, yes, sir—No. 1.

Q. You reduced the amount attributable to passengers under every item in the maintenance of way items, changed them all, didn't you?

A. Yes, sir, they were all reduced.

Q. And you reduced that account in total $277,508.06, did you not?

A. $277,521,40, yes, sir.

Q. Figure that over again. The general expenses you have reduced $34,258.88, including traffic expenses?

A. Yes, sir, $34,258.78.

Q. Now, this very great decrease in the proportion of operating expenses attributable to the passenger business gravely affects the result, does it not, from what it would have been if you had taken the Northern Pacific's division?

A. Yes, sir.

Q. How much, in percentage, on the operating cost relation to revenue; 19.26 per cent, the amount that you decreased the passenger cost?

A. No, sir, it would not show the same percentage of decrease of operation.

Q. Can you tell us how much it would show?

A. Yes, sir.

Q. What would it be?

A. 62.74 per cent would be the operating expense of passenger upon the Northern Pacific's figures.

Q. That is the operating expense of the whole passenger earnings, including miscellaneous, is it not?

A. Yes, sir, taken from Table 12.

Q. And under your method would it have been the same percentage of passenger operating expenses to passenger revenue, distinguishing between revenue and earnings, earnings meaning to include the miscellaneous?

A. No, sir, I could not determine that point without determining the expenses which would accrue to each of what you might term the miscellaneous passenger earnings.

Q. So the only percentage you did establish, then, as a matter of fact, was the average percentage of all passenger cost to all passenger revenue, including miscellaneous?

A. Yes, sir.

Q. And that is the only one got at, isn't it; that is the only percentage you could get at?

A. The only percentage, yes, sir, that I could get at. I don't mean potentially, but I mean as I treated it without further investigation.

Q. So, by your manner of division you decreased the passenger operating percentage to passenger earnings 13.36 per cent?

A. Yes, sir.

Q. From 62.74 to 51.38 per cent?

A. Yes, sir.

Q. And this so-called weather-stress item or element or unit or factor, whatever it may be called, enters into all of your divisions in the principal account or item under the head of maintenance of way and structures, does it not, aggregating a reduction of $277,508.06 out of $418,517.04?

A. Not all of these items, sir, but the most of them.

Q. Well, the amount of any item in the maintenance of

way and structures account—into the division of which this weather-stress element does not enter—is practically negligible, is it not?

A. No, sir; there are—

Q. Name the items into which it does not enter at all.

A. Removal of snow and ice, No. 56 repairs, cribbing and bulkheading, 59 (that is exceedingly small); maintenance of leased lines; repairs of buildings; repairs of docks, wharves and inclines; repairs of shop-tools and machinery.

Q. Isn't the weather-stress element just as applicable to division of total cost between freight and passenger in case a line is leased by a railroad company as in case the line he owned by the railroad company in maintaining the ways and structures? Does the character of the title of the particular company have anything to say to the propriety of weather-stress as an element for the division of cost between the two branches of business?

A. No, sir, but in your maintenance of leased lines you have leased those lines for certain purposes, and therefore, as far as those purposes go, not knowing the exact terms of the lease, the maintenance of the leased line would come under the purpose for which the line is leased; and it is on that basis that we have accepted the Northern Pacific allocation of this account No. 66.

Q. The Northern Pacific Company has no leased line in Minnesota over which, according to the terms of its lease, it runs freight and passenger trains both? Did you find that out to be true?

A. No, sir.

Q. It has no such line?

A. I did not find it had.

Q. Well, then, assume that it is the fact—certain trackage of the Minneapolis & St. Louis in the city of Minneapolis for the conduct of both freight and passenger business. Now, as

to the maintenance of way and structures items, as to such a track the weather-stress is just as much of an element and just as appropriately to be used as if it owned these tracks and used them for both, is it not?

A. That might be.

Q. It would be, wouldn't it?

A. It would be, but according to my notations here the Northern Pacific have allocated that between freight and passenger.

Q. On the train-mileage basis, haven't they, just the same as they allocated all of the rest of the common items under the maintenance of way and structures account?

A. No, sir, that is a division I speak of (or tried to speak of) where they used a factor as a division and an allocation where they have directly placed the expense to one or the other; and my records taken from their books show that this was marked as an allocation and not a division.

Q. How was it allocated?

A. I have not at any time gone into the details of the allocations by the Northern Pacific; if they state that it was allocated between freight and passenger, I have accepted that statement on their books, sir.

Q. Have you not considered that many items were wholly divided on some basis by the Northern Pacific when the vouchers of the expense show that certain parts of the vouchers were directly allocated, and is there any way to determine that except to go to their voucher and find out how it is allocated and how much—there being part of the amount directly allocated and part of the amount divided on some basis which seemed to the Company right—and doesn't your direct testimony assume divisions of totals in these various items which, as a matter of fact, were partly divided on some basis more or less arbitrary and partly allocated directly; doesn't that run all through your statements?

A. On almost all of these expense items there were items which were marked on the Northern Pacific books as common to freight and passenger, and there were items which were directly allocated to freight and passenger. Where the Northern Pacific books directly allocated those items to freight or passenger, I accepted their records as being correct and took them.

Q. How could there be a direct allocation of all of the maintenance of way and structures account upon a leased line any more than there could be a direct allocation of a line owned by the Company?

A. If you leased a line for freight purposes?

Q. No, where it is used for both, as the case of the Minneapolis & St. Louis. Of course, if passengers didn't go on it, there wouldn't be any allocation or anything necessary, simply freight item, pure and simple.

A. If it was for joint purposes, of course the division would have to be made between freight and passenger on some basis.

Q. It could not be allocated, could it?

A. It could not be allocated, no, sir.

Q. It would have to be divided?

A. Yes, sir.

Q. What railroad company did you ever hear of that, in its accounting department, where they undertook to divide the total expenses between freight and passenger, used this weather-stress element that is so potent in reducing passenger cost, as an element for division?

A. None of them use it.

Q. Never was used, was it, by any railroad company in its account?

A. By no railroad company, no, sir.

Q. And the only time it was ever used that you know of, save in this case or these cases here in this court in which you

are engaged, was, as you understand, by Prof. Myers in the Wisconsin case, where the freight rates were not under review at all?

A. Yes, sir, in the Buell case.

Q. And that was purely a passenger case?

A. And afterwards the same method was pursued in the case against the Soo Line. In both cases it was the passenger rate which was under discussion.

Q. Only in passenger rates. Have you made yourself familiar in any degree as to the number of railroad companies that follow the same method as that followed by the Northern Pacific Company in making its division between freight and passenger?

A. No, sir, but I should say that most of them do follow some method.

Q. Substantially the same as the Northern Pacific?

A. I should say that the majority follow substantially the same method of division between freight and passenger as shown by the Northern Pacific. I am not familiar with the number.

Q. Now, speaking from your general familiarity with the subject—and this is a very important subject, is it not?

A. Yes, sir.

Q. It is the most important single element in the whole point of difference between you and the Northern Pacific Company, is it not, in this case?

A. I say it is an important element, whether the most important or not I could not state.

Q. Well, it would have the effect of decreasing its percentages 11.36 per cent in the passenger business, would it not?

A. Yes, sir.

Q. Now, speaking generally from your knowledge of the conduct of railroad companies in the country upon that sub-

ject, let us assume there are about 225,000 miles of railroad in the United States—perhaps a little more now, but not a great deal—would you not say that as much as three-fourths of the entire mileage in this country divides on a basis practically the same as that used by the Northern Pacific Company?

A. I would not like to state that, as I know of several large exceptions to that point, and I wouldn't like to state the percentage.

Q. I mean of the roads you divided. You mentioned a couple that did divide, the Queen & Crescent, and the Chicago & Northwestern, I think, and perhaps you mentioned the New York Central, that didn't divide at all.

A. I don't know the New York Central, I am not familiar with it at all. The Pennsylvania used a slightly different system.

Q. The train mileage is the element of dividing common elements in the way and structures account, and it was so used in the Pennsylvania litigation, was it not, and approved by the Court?

A. I haven't seen that.

Q. That was true of the Louisville & Nashville, was it not?

A. The Louisville & Nashville use a form similar to the Northern Pacific.

Q. And adopted in that litigation, was it not, in Kentucky?

A. As far as the railroad statement went, yes, sir.

Q. You did work on that?

A. Yes, sir.

Q. Did you divide these elements by means of this weather-stress factor there?

A. Yes.

Q. Did it have the same effect there, to shift from the train mileage basis to the weather-stress factor in combination

with the other various bases where you used weather-stress, as it does here?

A. Yes, sir.

Q. Reducing the operating expenses?

A. Reduced the operating expenses chargeable to passenger.

Q. The Santa Fe never used this weather-stress, did it?

A. No, sir.

Q. You told us when you were upon the stand before, as I understand it, that the Santa Fe had formerly used the Northern Pacific method but had changed to what you call the Peabody method No. 2?

A. Yes, sir.

Q. And you gave us the date of the change?

A. I gave you that circular which I had, which was the only one that I had seen that the change called for.

Q. Now, Mr. Hillman, our information is that no such change has been made, and I say that to you that you will not assert that it has unless you know that it has. Now, independent of any circulars that you have seen, have you ascertained that the Santa Fe does not today, as it has for many years continuously last past, divided on substantially the same basis as the Northern Pacific?

A. The main difference between the Santa Fe division and that of the Northern Pacific is that the Santa Fe now includes in its division its switching mileage while on the Northern Pacific the general factor is the revenue-train mileage.

Q. What is the difference between revenue train mileage used by the Northern Pacific and the other used by the Santa Fe?

A. The difference would be reflected, to a certain extent, by columns 2 and—

Q. I don't ask for the amount of the difference, I mean to get at the units counted.

A. On certain items revenue-train mileage is used. There is a large amount of mileage made over the road in switching, which, in the revenue-train mileage basis is not taken into account. The principal part of this switching mileage is a freight matter. Therefore, it has the tendency when included, as it should be for the division, wherever the wear of tracks is or the repairs of locomotives are included, or anything that depends upon that mileage basis of switching, it tends to reduce the amount chargeable to passenger.

Q. And has the Peabody basis No. 2, which you have shown on Table 4 of this exhibit, ever been used by the Santa Fe road?

A. The method shown in detail upon double-column No. 6 of Table No. 4 is the application of Mr. Peabody's printed instructions in his accounting department to the Northern Pacific accounts. As far as—

Q. Now, has that method that you described at length in answer to Mr. O'Brien in your direct examination, which you have labeled on this table "Peabody No. 2," ever been followed on the Santa Fe road?

A. To the best of my knowledge and belief it has.

Q. No what is the source of your information upon that point and what is your information upon that point?

A. The source of information on that point is because I had a conversation on the subject with Mr. Peabody.

Q. When?

A. The last one was, I believe, about September of last year; I am not sure of the exact date.

Q. 1908?

A. 1908, yes, sir.

Q. What did he tell you?

A. He then handed me the memorandum of his methods in accounting.

Q. Have you that memorandum here?

A. I have a copy of it, yes, sir.

Q. Will you let us have it?

A. The copy which was given me by Mr. Peabody at that time has been sent to my manager at Louisville, Kentucky, and is in his possession. I had availed myself of the use of that one in making up this table. There is extant a copy which belongs to the Railway & Warehouse Commission and which I had in view when I answered your question. I haven't jurisdiction over that and I would have to refer you to them for that or else allow me to send to Louisville and get the copy which I had.

Q. Well, you had a copy here when the cross-examination commenced, and we asked that it be retained and held available to us; is that the one you sent away?

A. No, sir; I had already sent mine long ago. That was not the one; and if you remember at the time I stated that that copy was handed to me in confidence, but I had no doubt that Mr. Peabody would send you a copy if you desired, as he had them. He generally had no objections to giving them out, and it was with that matter in view, that that had been handed to Mr. Yapp, the secretary of the Commission, in confidence, and that I did not make the full statement that I would hand you that at the time. I feel perfectly free, though, to send and get my copy from the Louisville office and will wire for it at once if you so desire.

Q. I would like to have you do that. Now, was not that method used by him used to divide this "including switching Peabody No. 2" method between state and interstate in the Missouri cases, and was not used at all to divide between freight and passenger cost; and isn't that the fact, and have you not confused the subject-matter of division?

A. I think not, sir.

Q. Are you sure that that is true?

A. I am sure that in each of the divisions here there are

directions as to the division between freight and passenger mentioned on his paper.

Q. Yes, but aren't those directions just the same as the Northern Pacific directions, or substantially the same, and doesn't the modification come in which characterizes the so-called Peabody No. 2 to the other division between state and interstate?

A. No, sir, it is in the including with switching mileage as a factor that the difference occurs.

Q. Did you do that?

A. Include the switching method as a factor? yes, sir.

Q. Now, I notice on this Table 1, I think, (perhaps Table 2) that the Northern Pacific's division makes the division between freight and passenger by divisions.

A. Yes, sir.

Q. You put the aggregate all together in getting at your division that you used in your figures?

A. Yes, sir.

Q. Take the group of expenses known as the maintenance of way and structures account, you think switching mileage on the main line, for instance, at the terminals, at the Twin Cities, Duluth, Staples and the large points, wouldn't have anything to do with the divisions of maintaining the structure, the building or bridge on a branch?

A. It would have nothing whatever to do with the building under any circumstances.

Q. Or the repair of maintaining?

A. Nothing whatever to do with the building.

Q. Or the repairing or maintaining?

A. But with a structure, where it is used for purposes of the passage of trains over, or a utility where the trains pass over it, it would undoubtedly have an effect; as, for instance, the renewal of rails. The renewal of rails is taken as a total for the state of Minnesota, and those rails are worn by the

switching movement as much as any other movement, and therefore we must take it into account in determining those renewals of rails. Taking Minnesota as a whole, it must be considered. If we would consider it divisionally, then, of course, the switching which would accrue on the division which Staples is on, say between here and Staples, would necessarily not affect the branch from Little Falls west.

Q. No amount of switching at the terminals would have anything to say to the fences on the Little Falls branch?

A. Not if it was treated divisionally, no, sir.

Q. No, nor in fact? Of course, you can, by accounting, make it relate, if you want to, but I mean as a matter of fact.

A. There are none of those factors of which you speak included in fencing.

Q. By whom do you mean?

A. By me.

Q. How about Mr. Peabody's method, do you know?

A. I can't tell without looking at the paper which is now in Mr. Yapp's possession.

Q. If he took the whole aggregate on the system of road and divided between freight and passenger, (let us assume it is interstate so we will take in the whole Santa Fe system, or the whole Northern Pacific,) and to begin to divide depots and snow-fences and such structures as that upon elements containing switching mileage at terminals, at Seattle, we will say, and at the Head of the Lakes and St. Paul,—would that appeal to you as reasonable?

A. Not in reference to the buildings at all reasonable.

Q. Fences?

A. Fences, no sir; the switching ought not to come in.

Q. Ties?

A. Ties, yes, sir.

Q. That is to say, you think in dividing freight and passenger on the Northern Pacific road over its whole line on an

interstate problem, that it would be right to take into account the switching mileage of equipment that never moved over the ties in question?

A. That depends—

Q. Ties on Puget Sound to be divided on the basis of something containing the element of the switching at Lake Superior?

A. The switching which would be at Puget Sound would undoubtedly accrue to the whole line and should be certainly taken into account.

Q. But if some awkward operating man came around and doubled the amount of switching, it wouldn't affect the wear and tear on the ties on some other part of the track that the equipment didn't go over?

A. No, sir, but it would be one of the unfortunate matters of operation which has got to be spread over the entire system unless you treated it as a—

Q. Don't you think it would be a good way when the track or bridge or tie or rail is used for the passage over it of freight trains and passenger trains to divide between freight and passenger on some basis of that use of the track in question?

A. Yes, sir.

Q. Well, now, the switchmen in the yards don't use the track in question at all, do they—

A. No, sir.

Q. —when the track in question is out on the branch?

A. No, sir.

Q. Do you know how the Great Northern divides between freight and passenger?

A. Only through Mr. Martin's testimony in this case.

Q. You haven't examined that yet?

A. I was here and know just in a general way.

Q. You haven't examined the Great Northern yet?

A. No, sir.

Q. Do you know how the Minneapolis & St. Louis divides yet?

A. Between freight and passenger?

Q. Yes.

A. Yes, sir.

Q. Like the Northern Pacific?

A. No, sir.

Q. Like Peabody?

A. No, sir.

Q. How?

A. The Minneapolis & St. Louis divide non-allocated items on the percentage existing between car-miles, freight and passenger, and established that percentage.

Q. Don't use train-miles at all?

A. They then establish the revenue train-miles, freight and passenger; they add those two percentages together and divide by 2 and apply that percentage to their freight and passenger items.

Q. Is that a good way to do on that road? Is that a reasonable and accurate way?

A. It is not far out on the total results. The details vary considerably.

Q. It is not as good as Hillman No. 1 or Hillman No. 2, it isn't as accurate?

A. I do not think so. Of course, each one thinks his own method is the best.

Q. You think that on the maintenance of way and buildings account the element of earnings would be better than the element of use by cars and trains and engines, do you?

A. I have not so used it in my analysis.

Q. So used what?

A. I have not used the gross-earnings basis for that.

Q. All of your weather-stress items are divided by some method of division in which the matter of earnings is a factor.

A. Yes, sir.

Q. And made to depend upon earnings?

A. Yes, sir.

Q. Well, do you think, then, the element of earnings is a better factor to divide these common items of expense or a better element in a factor than the use of the track for the two classes of business, either the cars or the engines or the trains?

A. Yes, sir.

Q. But the earnings are wholly unrelated to the problem, are they not, have nothing to say to it at all?

A. No, sir, they are not wholly unrelated to it.

Q. The purpose of the inquiry (or one of its results, at any rate) is to determine whether out of each dollar derived from the freight business there is expended a like amount as there is out of each dollar derived from the passenger business?

A. Yes, sir.

Q. And if you had taken the year subsequently to the one that you did take, when the passenger rates had been reduced, it would have been made to appear, would it not, that the passenger cost was also less because you divided some of the items upon bases containing the element of earnings?

A. Had the freight receipts remained the same, yes.

Q. The freight rates have not changed, have they, since the first of May, 1907, when the passenger rates changed, as far as the state of Minnesota is concerned?

A. No, sir.

Q. So the application of your weather-stress method to the subsequent year would make the passenger cost appear to be still lower, would it not, because of the reduction of passenger revenue and the freight revenue, or rates, at any rate, remain the same?

A. Depending upon the fact whether the passenger revenue was reduced, yes, sir; that factor would of course be

variable with each year, depending upon the revenue derived from the two classes of business.

Q. And if the temporary injunction in this case should be vacated and thereby reduce the freight revenue, it would make it appear that the passenger cost increased, wouldn't it?

A. Yes, sir.

Q. Absolutely as well as relatively?

A. Yes, sir.

Q. Which would not be true, would it? The vacation of the injunction in this suit enjoining the application of the commodity rates under Chapter 232 of the laws of 1905 would not increase the cost of doing passenger business, would it?

A. No, sir.

Q. And you still think, do you, that the element of earnings is a better element to divide these items of maintenance of way and structures than the elements of use—passenger use and freight use—to-wit, the cars and the engines and trains?

A. Yes, sir.

Q. Now, if you would increase the number of passenger trains, you would increase the amount of cost, wouldn't you?

A. Yes, sir.

Q. But if you would increase the passenger rate of revenue, you would not, would you?

A. No.

Q. And still you think that revenue is a better basis than the use?

A. For these items, yes, sir. I have accepted that and made my tables on that basis.

By Mr. O'BRIEN:

Q. Have you got the copy that you spoke of, Mr. Peabody's directions that you said was in the custody of Mr. Yapp?

A. It is on the desk at the office.

Mr. O'BRIEN: Well, you better have that copy at 2 o'clock for Mr. Butler to examine.

Recess until 2 P. M.

AFTERNOON SESSION.

By Mr. BUTLER:

Q. Do the Union Pacific and Southern Pacific divide between freight and passenger on the same basis as the Northern Pacific?

A. I do not know, sir.

Q. Louisville & Nashville?

A. To a great extent, yes, sir.

Q. Practically the same?

A. Practically the same.

Q. Erie?

A. I do not know, sir.

Q. Pennsylvania?

A. I do not know.

Q. Burlington?

A. I do not know.

Q. Rock Island?

A. I do not know.

Q. You haven't given that matter any attention, in so far as this method has been applied on other roads?

A. In the most general way, only as it came up in this case and the roads which I touched.

Q. Look at Item No. 2 on Table 4; it is entitled Station Agents, Clerks and Laborers. Your problem was to divide that between state and passenger in the state, and you undertook to do it on the whole road in the state, disregarding divisions, as I understand you?

A. In that matter, the division between freight and passenger on the account which you have mentioned, the Northern Pacific have allocated a large proportion of those expenses

they have allocated them by divisions; I have accepted their allocation by divisions. So with regard to that it is not as striking an example of the use of the entire Minnesota matter as the remaining or as other accounts.

Q. You disregarded branches in divisions, did you not?

A. Yes, sir.

Q. And wholly so as to the common items?

A. As to the common items.

Q. How was it divided by the Company between states?

A. It was divided as regards the states, if my recollection serves me.

Q. Direct, was it not?

A. I believe so, yes.

Q. And you found allocated $[illegible], leaving $[illegible]-76 as common to both classes of service; and you divided the common item on the basis of the allocated items, leaving out the terminals at the Twin Cities and the Head of the Lakes; that is the way you divided it, isn't it?

A. Yes, sir.

Q. And you reached a result that charged to this item 11.94 to passenger; that is the percentage that the salaries of agents from the force-report should be limited to as I understand it?

A. I have those percentages here.

Q. Give them to us. Haven't you anywhere a table showing how you divided each item?

A. Yes, sir.

Q. I wanted to follow that manner of cross-examination as to all these items on Table 4, and I don't want to delay long enough to make you figure the percentages over again, but I thought it would be a pretty good way, in taking up this matter, to take each item and state the basis of division first between states, next between freight and passenger, next between freight inter and intrastate, and next between passen-

ger inter and intrastate, and that will take an item and follow it from beginning to end. That is the line I would like to follow here, but don't want to wait for figuring because that is too laborious for you and tiresome to us. If that is not a convenient way for you, or too troublesome, I will not follow it.

A. Well, it would simply necessitate the re-arrangement of my papers, which are continuous, you might say, according to these tables, and if you give me time to re-arrange them I will be very glad to follow them that way if it is more convenient for your purpose.

The MASTER: Did I understand you to say that you made the allocations as between states the same as the Northern Pacific?

WITNESS: Yes, sir, I accepted their allocations of states.

Mr. BUTLER: That is true as to all the items.

The MASTER: Yes, as to all of the items, I understood.

Mr. O'BRIEN: Now, I suggest, if you have those percentages figured out, Mr Butler, that you can state them and embody them in your questions and they can be assumed to be correct subject to correction.

Mr. BUTLER: All right, I don't know that I have, in all instances; I think I have.

The MASTER: They can be checked up.

Mr. O'BRIEN: They can be checked up again; and, in that connection, I wish to ask Mr. Yapp to bring that Peabody formula here for you that you spoke about this morning. Have you?

Mr. YAPP: Yes, sir.

Mr. BUTLER: Let's see it.

Formula produced by Mr. Yapp.

Q. On this item No. 2, the allocation by the Company which you accepted between states was direct, was it not?

A. Yes, sir.

Q. And the basis of the division of the unallocated items between freight and passenger was the allocated items after deducting the allocated items on terminals on the Superior division, and the reason that you deducted the allocations on these terminals was because these terminals are largely engaged in the freight work?

A. Yes, sir.

Q. Then you went to the salary report of the salaries of the agents' force, and estimated that 11.94 per cent should be charged to passenger, and 50 per cent of the balance you divided on carload freight, intrastate and interstate, and the balance of the account on percentages based on handling, did you not?

A. Yes, sir.

Q. And when you got all through, you charged to freight 75.21 per cent of the item, and to passenger 24.79 per cent of the item?

A. Of the non-allocated items you mean? Yes.

Q. Of the common items there?

A. Of the common items, yes.

Q. Now, Staples does substantially the same work as Minnesota Transfer, does it not, or the Head of the Lakes?

A. There is a large work of that character at Staples.

Q. Did you undertake to allocate to freight the freight expenses at Staples?

A. No, sir.

Q. Now, if you had treated Staples the same as you treated the Head of the Lakes and Twin Cities, would it not have changed the percentage of division of the common items so as to have charged 48.33 per cent to freight instead of 75.21 and to passenger 56.67 per cent instead of 24.79?

A. That I am unable to state not having the figures for Staples.

Q. They were open to you, were they?

A. Yes, sir; there was no limit put to my examination of the books.

Q. Let us assume the situation to be substantially the same at Staples as it is at Twin Cities and the Head of the Lakes, and assume, further, that it would have made the change to the extent that my question indicated; would you not think then that your division was inaccurate?

A. Yes, sir, assuming that the conditions were the same at Staples as at Minnesota Transfer.

Q. They are the same, as far as you know, are they not?

A. No, sir, not exactly.

Q. Well, substantially the same as they are at the Head of the Lakes?

A. To a certain degree, yes, sir. If you would give me the figures which you have for the Staples movement I could readily tell you how much the total difference would be, if you desire it.

Q. Yes, I will do that. I call your attention to the Staples figures and the terminals other than Staples for June, 1907, furnished me by Mr. Johnson, which are as follows:

"June, 1907.	Common	Freight	Passenger.
Minnesota Division	6509.32	3559.20	722.80
St. Paul Division excluding terminals	2942.36	675.75	938.00
	9451.68	4234.95	1660.80
		71.83%	28.17%
Hillman's percentages		75.21%	24.79%
Minnesota division		3559.20	722.80
Deduct Staples transfer		2964.83	
		594.37	722.80

St. Paul division excluding terminals	675.75	938.00
	1270.10	1660.80
	43.33%	56.67%
Revenue train mileage	142.810	124.464
	53.43%	46.57%"

Now, if you treat Staples expenses in your computation as you did the other terminals, the result will be changed in the manner heretofore indicated, will it not, charging to freight business only 43.33 per cent of the common items instead of 75.21 per cent, and to passenger 56.67 per cent instead of 24.79 per cent?

A. That computation would take considerable time and perhaps I had better not stop for it now. My idea was that you had the allocation, (when I first spoke) for the year (which I could use) which you have for the month. The allocation of Staples, and removing Staples from the total and treating it in the same way as we have the Minnesota Transfer, would change the percentages which we would apply on the remaining portions of the division. At the same time, it would of course, add to the freight column and to the passenger column the amount of the allocated Staples expenses.

Q. Have you in mind that Staples is included in the allocations just the same as the other terminals, according to the records of the Company?

A. Yes, sir.

Q. And the effect of treating Staples the same as the other transfer terminal points would be to increase the percentage of common items chargeable to passenger expense in the state, would it not, greatly?

A. According to your figures, yes, sir, it would.

Q. And you haven't the least reason to doubt the correctness of the figures for the month of June, 1907, have you?

A. I don't care to answer that, Mr. Butler.

Q. Well, does any occur to you now? my idea being that if none does, it may be so stated, and if, later on, you conclude there is something wrong, you may point it out, but I would like to have the result of your examination of the statement in the record.

A. I know nothing concerning the figures mentioned in the question a moment ago concerning the Staples transfer.

Q. Assuming the figures to be correct, is there anything that occurs to you now wrong with the deductions?

A. No, sir; I have not examined the matter. Nothing occurs to me on the moment.

Q. Now, the result that you get of the division of this item 2 is made the divisor of other items, is it not, and quite a number of them, either the sole divisor or is used as an element in the division of a lot of other items?

A. It is used, of course—it would affect the division of the same item in the inter and intra.

Q. Freight or passenger, or both?

A. Both, of course and it would also enter into whatever items were prorated upon the totals of the expenses preceding them, which would be the last three items of expense on this division of conducting transportation; it would also enter into the division of items 83 to 95 on the basis that those accounts were divided upon the preceding accounts.

Q. And it is made the sole divisor of item 3 and item 4 next following, is it not? 3 is station supplies and 4 station furniture.

A. No, sir, No. 3 is treated in the same method on the figures given by the Northern Pacific, but the figure 2 is not applied to it.

Q. The same error, if any, by reason of not treating Sta-

ples the same as similar places, obtains as to 3 and 4, but the results of 2 are not used as the divisor of 3 and 4; is that the way we are to understand it?

A. That is correct, yes, sir.

Q. What relation in these items 2, 3 and 4 has the amount of allocated items to the amount of unallocated items? That is to say, what relation has the freight-house expenses and those that are exclusively freight, including them all, and the passenger ticket-sellers' salary and the other items that are exclusively passenger, to the common items?

A. Outside (as I stated in my direct testimony) of the terminal expenses, it might be termed abnormal. The supposition is that stations which have a business large enough to be allocated (and therefore to have a force which could be used distinctively in the freight and passenger business) would naturally reflect the conditions of the traffic through the state, and that therefore the non-allocated portions which represent the stations which are not yet large enough to have their business divided could be divided to freight and passenger on the basis of those stations which are already allocated; that is, that the larger, where you can make a division, reflects the use which is made of the smaller where no division is possible to be made.

Q. Let us take a branch line that has a passenger train a trip per day and a freight train a trip per day; take the station agents, clerks, etc., at the stations along the line of the branch; what do you think would be a fair way to divide that? by a lot of the allocated items where they have separate stations for freight and passenger in different parts of the road, or do you think it would be right to divide it on some basis of the employment of these men at the stations?

A. I think, as you have intimated, that if we had what we term in cost accounting the division of their time according to the duties performed, it would, of course, be the best basis;

but we haven't got that available; the only thing that we have available is where through force of the increase of business the division between freight and passenger forces itself upon the road and is made, and therefore it is the most direct factor that we can get for the basis of the non-allocated divisions.

Q. Well, the allocation of certain items and then dividing common items on the basis of the allocation arithmetically, is not a division at all of the common items, is it? it is simply assuming that they run the same as allocated items, and you would get the result precisely if you would lay aside the items in question that are common; it is, at most, the merest make-shift, is it not?

A. No, sir, it struck me as being a very fair factor, in the absence of the direct keeping of the time of the men as employed in the different capacities.

Q. Is it not true, on many of the branch lines where the traffic is sparse, that laws providing for things to be done for the convenience and safety of passengers and their comfort at the stations, impose a peculiar and added burden on the Railroad Company to keep them there at times they otherwise would not be needed?

A. That I do not know, sir.

Q. You are not familiar with the law relating to the hours of service of telegraph operators or the laws providing for the opening of stations and keeping them warm and having them open so many minutes or such a period of time before the arrival of the passenger trains, and that class of regulations for public convenience relating wholly to the passenger business; you are not familiar with those at all?

A. I have not examined them, no, sir.

Q. Now, it is true that a large number of stations on the branch or other lines of this Company are required to be open and warmed, etc., by the help, strictly on account of the pas-

senger business; is that an element that ought to be taken into account?

A. As I have stated, that if we had that allocation kept and the time of the men, station agents and all others, kept with that purpose in view, of their employment as to freight and passenger, it would give us the best factor possible and what might be considered an absolutely accurate factor. As that does not exist, I assume to say, and feel warranted in the assumption, that the next best factor which exists now, is the allocated items, where the stations have grown large enough, to practically make the cost division between freight and passenger.

Q. What percentage of station furniture did you allow to the passenger business and what to the freight? That is item 4.

A. I allowed the percentage allocated by the Northern Pacific, on the basis of what was allocated, which gives me 33.9 per cent passenger and 66.1 per cent freight.

Q. They allocated by divisions, did they not?

A. Yes, sir.

Q. You did not. You put it all in a pot, did you not, and took a general average?

A. Yes, sir, I took the allocations which they had on the Terminal division, Lake Superior division, St. Paul division and Minnesota division, and the basis of those allocated items divided the remaining non-allocated.

Q. Now, don't you think, as a matter of fact, take the branch lines where stations are joint freight and passenger stations, that a good deal more of the furniture is used in repairs in the passenger business than there is for the freight business?

A. Yes, sir, and that very fact is shown by the larger percentage charged to freight business as shown by the Northern Pacific's allocation at that item, which amounts to—

Q. What was the total division there?

A. The total division was $3,940.73, or 33.9 per cent passenger and 66.1 per cent freight, while the percentage on the help was 75.21 freight and 24.79 passenger.

Q. Now, let us look at item 3. What is the percentage of your total division of this item? That is station supplies.

A. 72.76 and 27.64, respectively, freight and passenger.

Q. Don't you think it would be more accurate to divide that per division than it would be to put the whole thing in a pot and average?

A. No, sir, I do not.

Q. You think it is better to put it all in, and if you were engaged in an interstate case, would that extend to the whole line, or would you undertake to make the divisions by less than the whole line if you had in the six or seven thousand miles instead of only eleven or twelve hundred miles whatever it is?

A. If I had in the entire Northern Pacific line, I should use that as an "operating tool" in its entirety.

Q. Yes. That is the matter of clerks and supplies and furniture, you would treat on the same basis and disregard the relation of expense between freight and passenger to any particular division or part of the road or any state, but regard it as all one grand matter, allocate where you could and divide what you could not allocate on the straight basis of the allocated items after you deducted the terminals and things that you thought ought to be deducted; is that right?

A. I think it is very probable that I would handle that on that basis.

Q. Why did you deduct any of the allocated items at the terminals? if there is a relation between unallocated items and allocated items in 2, 3 and 4 of this account, does not that relationship extend to the total of the allocations, or only to a part of the allocations?

A. The allocated items are taken into account in the total. There are a certain number of stations on the road whose division between freight and passenger is upon the basis which you might say is done through the stations. These stations do not bear the relation of the traffic passing through their doors which would be indicated by the heavy traffic which would be due to the entire line passing through and over what you might call the terminals, and therefore the measure of the division of those stations would be the stations outside of the terminal. Having divided those stations by the factor which more closely represents the business passing through the station, we then return and add to those the allocated items, thus obtaining what we consider a fair result.

Q. In determining what is a terminal to be eliminated, that is merely a matter of judgment, growing up as a result of familiarity with the work, is it not, as to whether you would include a station like Staples and treat it as Twin Cities and Duluth, or whether you would treat it the same as you do St. Cloud; it is a matter purely of judgment, is it not?

A. There is a question that comes up in that regard which is to define accurately where a station ends as a station service and where a station becomes a terminal, and as such, I could imagine a case where you would start with a terminal and gradually taper it down, one station after the other, all more or less closely having this terminal feature in them until you could reach a point where you would include all your station expenses as terminal expense, and necessitate the division of them all. There is a point where you have to draw the line, and you might ask me why, if Staples was included, St. Cloud should not be included; why Brainerd should not be included; and I would merely say that in my judgment I drew the line where the remaining items would justly reflect the operating conditions as far as station services went for

the balance of the undivided ones.

Q. Well, you see at once, do you not, that the disposition of Staples expenses in this problem is one of the utmost importance on account of the change that it will work upon the percentage of division of the common items here, and especially in view of the fact that the result here is an element in some other things? Now, do I understand, then, that you have so analyzed the situation as to be able to form a mature and deliberate judgment that Staples is not a terminal within the meaning of that expression, and that St. Cloud and all the other stations are not, and that there are no terminals in the state except those which you excluded?

A. In my method of analysis I have excluded Staples and—

Q. You have not considered it a terminal, you mean?

A. Yes, sir; I was going to say I have excluded Staples and all other points outside of those,—you might say the Lake Superior Division,—from the Terminal division.

Q. Yes, I know that.

A. Yes, sir.

Q. Were you aware that treating Staples as you did the other terminals would make so great a difference in the percentage of division? That is, did you have in mind the consequences of that ruling when you were making up your figures, so that—

A. I did not examine into the Staples expenses at all, sir.

Q. Well, now, do you not think, assuming Mr. Johnson's deductions to be correct, that it would make so great a change that it ought to be very carefully determined what to do with Staples, where the change from the freight expenses is from 75 per cent plus to 43 per cent plus, depending whether you regard Staples as a terminal or not? don't you think that ought to be very carefully determined?

A. That would indicate that there are very heavy ex-

penses of that character at Staples, and it would then depend upon the division of the rest of the line, plus Staples allocation, as to how much money difference it would make in the division. What that is I do not know. I could figure, and probably will, later on, but it is a little too long a computation to go into just now.

Q. Now, I will ask you on the percentage basis, inasmuch as this element is not convenient to figure, whether such a change of percentage is not, in your opinion, a very grave matter which calls upon one using one or the other as a basis to justify his ruling?

A. Yes, if we considered Staples in the nature of a transfer point, it would be necessary for us to make a further investigation as to the division.

Q. Let us pass to No. 5, switchmen and watchmen. On your direct examination, as I understood you, you said that of the total of $444,843.85 the Company allocated direct to freight and passenger $310,672.05; that of the remainder or common, amounting to $134,171.08, you find on page 59 of the Northern Pacific report to the Minnesota Commission, year ending June 30, 1907, $62,939.86 was for switchmen, and you divided this on the engine-mile basis, including switching, taken from your Table No. 3. Now, I want to ask you how much switching mileage did you attribute to passenger and how much to freight.

A. The mileage was an allowance of five per cent made to passenger.

Q. Where did you get the five per cent from?

A. From the fact that the percentage I knew was very small—

Q. How did you know that?

A. —from the basis that on a prior road I had examined, the amount was a fraction over six per cent; on the M. & St. L. they had allowed, and stated it was, on actual figures, five

per cent; I assumed, knowing approximately, the five per cent, and put that in as the basis for passenger switching mileage.

Q. What was the prior road you examined?

A. The L. & N.

Q. Does it, in its statistical accounts, keep separately freight and passenger switching mileage in yards where both is done?

A. No, sir; we were compelled to enter into quite a detailed examination for that.

Q. Does the Minneapolis & St. Louis keep a separate account of switching engine mileage, as between freight and passenger?

A. Yes, sir.

Q. In the yard where both kinds of switching is done?

A. Yes, sir, of necessity they must do that.

Q. They must do it of necessity?

A. Yes, sir; I mean if they keep the thing at all they must keep it in all yards where there is switching done.

Q. Well, do they?

A. They do, or at least they stated they did, and I accepted their allocation.

Q. Did you find out how they keep track of it? Here is a crew that does both; one part of the term of its service each day it switches some passenger cars and another part of it switches some freight cars; now, how is the time kept, the movements of the engine kept, or the mileage kept? Inasmuch as you are using the figures of the Minneapolis & St. Louis as a justification for an assumption in the Northern Pacific case, we would like to have, if you can give us, the methods.

A. I can only take their statement of the fact that their basis was the absolute movement of the cars by their switch engines, whether freight car moved or passenger car moved.

Q. What mileage is kept—car mileage?

A. Yes, sir; they report a switching-car mileage; whether that mileage is in total and then divided upon the hours' or minutes' use of the locomotive I am unable to say.

Q. But the Minneapolis & St. Louis, in yards where both classes of switching are done by the same crew, keep mileage statistics of the miles moved of each class of cars, does it?

A. As I said, I do not know whether they keep it. They keep track of the cars moved, whether they count up the miles upon those cars or calculate that mileage upon the basis of the number of cars moved and the time employed, I am not sure; but in either case it would give practically the same result and I should therefore say that their switching is kept on practically a mileage basis.

Q. That is, the distance the cars move?

A. Yes, sir.

Q. Do you think if they take a passenger car from the place where the train engine left it and turn it around and put it on some other track, they will measure the distance from where it stopped by the road engine to a turn-table and the various switching movements that may be necessary back to the place where it has to be cleaned and thence on to the place where it has to be taken out,—is that your understanding of their method?

A. No, sir.

Q. Well, you said they kept the distance moved, as I understood you.

A. I thought I had made myself clear on that point that they keep the mileage moved. I said whether they keep that by the direct number of the cars handled or the time employed by the switching crews in handling those cars, or whether they count up the mileage. I am not sure, but the result would be practically the switching mileage.

Q. Switching car mileage?

A. Yes, sir.

Q. Did you ever know of a railroad company to keep that sort of statistics, measured by distance as of cars, either freight or passenger, in switching movements?

A. No, sir; and there are very few that keep even the detail that the Minneapolis & St. Louis has got, and I was very glad to have that.

Q. Did you ever, in your study of cost accounting or the railroad problem at all, know of any statistics of switching-car mileage based on the distance that the various cars moved during the switching movements?

A. No, sir.

Q. Never heard of such a thing, did you?

A. Never came across it on a railroad.

Q. You had no reason to suspect that the Minneapolis & St. Louis did that, did you?

A. I should not think they would.

Q. Tell us what they did do. You took this as your criterion in the Northern Pacific. It was not the distance of cars moved, nor the time involved in moving each car, was it?

A. As I recollect their basis of that movement, they used the number of cars moved by the switching engine and in a general way indicated the distance which they would move.

Q. Both freight and passenger cars?

A. For both freight and passenger. I am not clear on that point, whether they used the number of cars and the time or made that up from the number of cars and the mileage.

Q. Well, in ordinary switching movements in a freight yard, the breaking up and making up of trains, that condition would vary with the switching problems that were presented by each train, which switching problem would depend upon the room there was in the yard, the location of the cars coming in on the train, the disposition of them going out, either to industries or transfer trains, would it not? You are familiar enough with yard methods to know that it would be a physi-

cal impossibility and an arithmetical impossibility to keep track of the mileage of freight cars in a switching yard movement measured by distances?

A. Yes, sir, to keep it with arithmetical exactness, it would be.

Q. Are these switching-car-mileage statistics common statistics among railway companies? Did any railroad company with which you have ever been connected keep switching-mileage statistics of freight cars and of passenger cars separately or together?

A. None excepting this Minneapolis & St. Louis road.

Q. So you determined, did you, for a basis of dividing a part of item 5, switchmen and watchmen, that 5 per cent of the switching-car movement was right because of the experience you had with the Louisville & Nashville, which didn't keep any statistics on the subject, and with the Minneapolis & St. Louis which did?

A. Yes, sir, it being (as I stated that I deemed it) necessary for me in the L. & N. case to look up that point and have my men report upon it. The result, if I recollect it now, was six and a fraction per cent passenger movement. I know that it was not far from the 5 per cent which I had from the Minneapolis & St. Louis road, and that therefore the L. & N. statistics, coming subsequent to this, I did not consider it of enough importance after the receipt of the factor on the L. & N. to change the statistics that I had already adopted, which was from a Minnesota road.

Q. Calling your attention to your Table No. 4 and double-column No. 6, the method called "Peabody, including switching",—this Peabody method takes into account the car mileage, freight and passenger, of the cars that are switched; is that what the phrase "including switching" means there?

A. No, sir; Mr. Peabody includes his switching mileage as a freight movement, I believe.

Q. Yes, he does not attribute any of the car-switching mileage to the passenger business?

A. No, sir.

Q. And he uses the total car-switching mileage, both freight and passenger, as a basis for many of his important divisions, does he not?

A. Yes, sir.

Q. And attributes all of the car mileage in the switching movements to the freight business, does he not?

A. I think he does, yes, sir.

Q. And you are therefore of opinion that Mr. Peabody is wrong, are you not, because the truth is that some (perhaps a good deal) of the switching is done moving passenger cars. That there are exclusively coach yards on some roads where crews are engaged in switching all the time, are there not?

A. Yes, sir.

Q. So then you lose confidence in Mr. Peabody's No. 2 basis, because he does not divide according to the manifest truth, but manifestly divides in error; isn't that true?

A. I would not say that I lose confidence in Mr. Peabody's method.

Q. Well, to that extent?

A. To that extent I consider it erroneous.

Q. That he cheats the passenger that much or makes it apparent that the passenger business is being done at less than it is done; isn't that true?

A. Yes, sir.

Q. Did you use the switch-engine mileage as a factor at all in the division of this item 5?

A. Yes, sir; I used the switch-engine mileage, you might say, as the switch-train mileage. There is no such train mileage and I used the switch-engine mileage as a factor.

Q. So then you used the switching-car mileage, passenger cars, the switching-freight-car mileage and the switching-

engine mileage? I would like to get at how you divided the switching-engine mileage as between the freight and passenger business where the same crew in the freight yard does both kinds of business.

A. By the 5 per cent.

Q. Does the Minneapolis & St. Louis keep track of the distance its switch-engines move, approximately, by some general system? Of course, I know they would not measure each movement to see how far they moved.

A. Yes, sir, they have a general rule for that.

Q. What is their general rule for that?

A. They allow so much per hour for switching movement, —which is corrected, from year to year, I believe, by the number of cars handled, with a certain percentage of average distance. I have that memorandum at the office, and really for the moment I cannot recall it, but I looked at it with considerable interest at the time. I would have to look up that rule before I could answer.

Q. And it was upon the faith of the Minneapolis & St. Louis rule as to determining, by switching mileage of engines engaged in common in the freight and passenger business, that you set upon 5 per cent as the proper percentage of switching-engine mileage on the Northern Pacific road to use as your basis of division?

A. Yes, sir, practically on their basis.

Q. And you say that while you do not remember the details of that rule, it takes into account the cars handled and the number of them, and, in a general way the distance, and makes some sort of a division attributable to engines on that, getting the average number moved in each switching movement; is that the idea?

A. Something of that kind, I should judge; I will have to look at that rule before I can answer.

Q. Does the Northern Pacific Company keep switching-engine statistics?

A. Not that I know of outside of the switching-engine mileage.

Q. How do they get at the switching-engine mileage,—the same as the Minneapolis & St. Louis, or in some other way?

A. I do not know, sir.

Q. Do you know whether in getting at their switching-engine mileage they arrive at it in some way depending upon the kind of cars moved and the average distance they move, or anything of that sort?

A. I don't know how they arrive at it.

Q. Do they keep it separate between freight and passenger?

A. Not to my knowledge.

Q. Didn't you inquire for that?

A. I did.

Q. And you were told they did not?

A. Yes, sir.

Q. Do you know any railroad company that does?

A. No, sir.

Q. You have never heard of that being done?

A. Not, as I said, outside of the Minneapolis & St. Louis.

Q. The Minneapolis & St. Louis does?

A. Yes.

Q. Is there any well-recognized method of keeping account of the mileage of switching engines and switching cars that is recognized among railroads generally?

A. No, sir, not as far as my experience goes.

Q. Are you familiar with the schedules of pay for switchings crews?

A. No, sir, I have not examined them particularly.

Q. Do you know whether the schedule is based in terms upon the distance moved or the time occupied?

A. I should say undoubtedly upon the time.

Q. Is it not recognized everywhere in this country that there is an engineers' brotherhood or a firemen's brotherhood and that six miles per hour is the distance of travel of a switching engine, and are not the statistics also kept by all railroads, including the Northern Pacific?

A. I do not know, sir.

Q. Would you be surprised to find that switching-engine mileage is based not upon movement of the engine at all but upon the time that the crews aboard of it are getting pay for moving, and that it is figured in mileage just the same whether it switches a car or whether it doesn't subject to certain modifications?

A. No, sir.

Q. You never heard of that at all?

A. No, sir. You asked me if I would be surprised; I say I would not.

Q. Now, give me the figures of the switching-car mileage that you attributed to passenger-car switching in dividing the element in item 5 which depends upon that thing.

A. Those figures were made some time ago and I do not seem to have the data here.

Q. Can you give me the same mileage as respects freight cars that you used for the division of a part of this item 5?

A. No, sir. If I could give you a part I could give you the passenger figures.

Q. Can you give me the same as respects engines that did the switching?

A. I can make up those figures for you. I don't seem to have the details right here. If you desire, I will go to work and make them up.

Q. You have the data, have you—

A. I have some of it.

Q. —for the three mileages, passenger-car mileage,

freight-car mileage and switch-engine mileage, that you used to make the division of a part of item 5, switchmen and watchmen, on your Table 4?

A. On the basis of the engine mileage. I understood you to say car mileage, a moment ago; freight-car mileage, passenger-car mileage and switching-engine mileage.

Q. Have you those three figures in your possession? I don't mean here in court but anywhere in the world.

A. If you notice, I divided the switching on the engine-mileage basis.

Q. Then you didn't use passenger-car mileage at all?

A. No, sir, I did not.

Q. Nor you didn't use freight-car mileage at all?

A. No, sir, I used the engine mileage of those.

Q. Did you see passenger-car switching mileage for the division of anything, anywhere, in your whole problem?

A. No, sir.

Q. Did you use freight-car switching mileage for the divi sion of anything, anywhere, in your whole problem?

A. No, sir.

Q. Did you assume that the switching mileage for passenger cars of the Northern Pacific road was any amount whatever of 5 per cent of the total switching-car mileage of both freight and passenger?

A. No, sir. As I said, I used it as the basis of the 5 per cent of the switching-engine mileage.

Q. Did you ever know anybody to undertake to divide anything upon the mileage of cars moved in switching or to use it as a basis or a factor for it, either freight or passenger cars?

A. Yes, sir, I have been compelled to use certain car mileage in my division of the weight of switching engines on the rails in this very division.

Q. In what item?

A. In the maintenance-of-way-and-structure accounts.

Q. All of them?

A. Most of them, yes, sir.

Q. Can you give me the passenger-car mileage that you used, the number of miles?

A. I used the average train weight—which you might say included that.

Q. No; weight does not include mileage at all. Your average train weight was 200 tons for switching, and 1,100 tons for freight trains, and for passenger trains 575 tons,—was it, or 500 tons even?

A. I forget the figure.

Q. Now, you never before today, except in that exhibit in this case, heard of using switching-car mileage, either freight or passenger, for any purpose at all?

A. I believe I stated that we used those factors of the weight of the passenger movement and the weight of the switch movement and the weight of the freight-train movement and reduced it to train miles. As the weight of the car was included in that, it would necessarily mean that we used a car basis for it.

Q. No, no, isn't this what you did: assumed that every time a freight engine moved a mile on the average it had 1,100 tons in the train, and every time a switching engine moved, whether in freight or passenger business, it had 200 tons in the train, and every time that a passenger train moved it had —what was that figure, do you remember, Mr. Yapp?

Mr. YAPP: No.

Q. —had a given number of tons in the train to divide those elements of the maintenance-of-way-and-structures accounts, which do not depend on weather-stress; isn't that what you did?

A. Yes, sir.

Q. And it was the engine mileage that you considered, the

train mileage, in each instance, wasn't it?

A. Yes, sir. What I was trying to explain was that, as those train weights are made up of the cars on them, necessarily, in that view of the matter, there would be a car mileage in it. That is what I was after.

Q. No, you considered switching engine movement and switching train movement, didn't you, and called the train 200 tons?

A. Which train was made up of engine and cars, yes, sir.

Q. Aside from that it is the equivalent of switching-engine mileage, isn't it?

A. No, sir.

Q. It is not?

A. Why, certainly not, when you take the weight of cars in as well as switching.

Q. So then, in your division of the items in the maintenance-of-way-and-structures account, the switching mileage which you there used was not the equivalent of the switching-engine mileage?

A. No, sir.

Q. Now, will you give us the switch-engine mileage, and also give us the mileage that you used?

A. The switch-engine mileage was 2,204,809 train-miles.

Q. What was the switch-train miles?

A. That is what I call switch-train miles.

Q. That is the equivalent of the switch engine?

A. Yes, sir.

Q. Now, the switch-car miles?

A. In this case the switch-train movement was taken as 200 tons.

Q. I wasn't asking for the weight; I was asking for the car-miles. You have told us they were different from the switch-engine miles or the switch-train miles.

A. I haven't got the switching car miles for that. It is

included in the total weight of the switch-train movement.

Q. How many car miles is the equivalent of an engine mile in this 200-ton switch train; did you come at it that way?

A. In making that computation for the weight of the switch trains, we have practically used 11,024,045 car miles.

Q. And attributed 5 per cent to passenger?

A. Yes, sir.

Q. Now, what element did you divide on that figure, anywhere?

A. The wear item in maintenance-of-way-and-structures accounts.

Q. Wasn't that on the weight?

A. On the weight, yes, sir.

Q. It wasn't on the wheel basis at all, was it?

A. No, sir.

Q. And you never made that figure before in your life and it never was made, was it, that you know of?

A. It wasn't necessary to make it, but as you have asked for it I have figured it out from the total result.

Q. You have made that up completely, haven't you?

A. Yes, sir; as you have asked me if this matter of the car movement enters into any of the divisions—it does certainly enter into the division.

Q. I didn't ask you that, I asked you if the mileage entered into it.

A. The car mileage, yes, sir.

Q. Will you produce your sheets which you have heretofore made, any of them, and show us any item of switching-car mileage, freight or passenger, that you have used in divisions?

A. I do not recall that I have used any of that.

Q. No, sir. So this talk about switching-car mileage is wholly irrelevant, is it not, and resulted from the fact that at first when we entered upon this subject you did not have in

mind, or temporarily it passed from your mind, that it was switch-engine mileage that you used as a basis for a division of some of the items common to freight and passenger included in switchmen and watchmen; isn't that the fact?

A. Yes, I think it is, because I notice that a little later in your statement I attempted to correct your use of the word "car mileage" in connection with engine mileage.

Q. So this narrative that you gave as to the investigation of the statistics of the Minneapolis & St. Louis road in its keeping separate accounts of common movements in common yards between freight and passenger,—were you in error about that, or wasn't that the engine and not the cars?

A. They kept account, as I was stating, of the movement of their cars in the yard; that is, each movement, and as I stated,—

Q. They measured that by the engine-mile movement, didn't they, and they measured the engine movement by time, didn't they?

A. It is very possible that they did, yes, sir.

Q. So that there is no such thing known in railway statistics as switching-car mileage, is there? It is not called for by any commission, interstate commerce or any of the states; is it, or is it not?

A. I don't know; not to my knowledge, sir.

Q. You never saw that kept anywhere, in all of your railroad experience, including your investigation, separately and distinct from switch-engine movement, did you?

A. No, sir.

Q. You don't say now, having your attention called to it, that the Minneapolis & St. Louis keeps a separate switching-car movement?

A. I see now where all this discussion arose—from the fact that you were asking about car movement and I had started and was trying to explain the car movements from

the time, as I stated, of the engine movements, and I see that I have overlooked through there that car movement basis, it seems to me, and got a little tangled on that subject; I have been trying to explain to you what was distinct to me, that engine-mile movement, and started calling it a car-mile movement.

Q. Is it true that you have somewhere a statement of the method by which the Minneapolis & St. Louis Company measures the distance moved in switching movements by its passenger cars and by its freight cars, or were you confused about that and meant the engines?

A. I think that I discussed that matter with the M. & St. L. people, and I think yet that I have a confirmation of that by some method of car movement; I wouldn't be sure, but such is my recollection now; I will refresh my recollection on that.

Q. In this item 5 you say that $62,939.80 represents wages of men watching crossings and yards; did you determine that from an examination of the pay-rolls and the like?

A. No, sir.

Q. That item was divided on the engine-mile basis including switch-engine mileage, was it not, by you?

A. Yes, sir.

Q. Any part of that allocated directly by the Northern Pacific Company to freight or passenger? Of the total account there is $62,939.80 which you took from the report of the Commission and divided on the basis of engine mileage including switch-engine mileage. Now, I want to find out whether a large part of the $62,000-plus was not directly allocated by the Northern Pacific Company, for it showed just where the watchmen were and what they were doing.

A. Of the total account, which is switchmen, flagmen and watchmen, or switchmen and watchmen, the Northern Pacific had allocated directly $310,000. The item which you mention

of the watchmen, $62,939.80 was treated by me as if it had no allocation by the Northern Pacific road—

Q. Why?

A. —and the other allocation came directly in the other accounts.

Q. Isn't there a very large percentage of that item shown by the records of the Northern Pacific Company to be for watchmen at the docks and freight houses of the Northern Pacific road, so that no division at all was necessary if you had analyzed the item?

A. Yes, sir, if I had gone further into the analysis of that item, I might have found that a proportion—how large I do not know—of this $62,939.80 which I have taken as non-allocated was in reality allocated.

Q. Yes, and that would change your result, in all human probability, wouldn't it?

A. Yes, sir.

Q. Switch-tenders, for example, you ought, on your theory, to divide—you did divide switch-tenders, did you not, on the basis of 5 per cent passenger, and the rest to freight, that being the basis of switch-mileage?

A. Yes, that entered into that.

Q. Now, if we will say a large proportion, say half of this $62,000-plus was for watching docks at Duluth in exclusively the freight yards, your division is all wrong as respects that, is it not?

A. It would make a difference of 3 per cent between freight and passenger upon the total amount so allocated, and would place 3 per cent on such account less to passenger than I have now put in here,—

Q. Yes. And this—

A. —if it was $40,000, for instance, of that, or say half of it, (it would be $35,000) it would put in the neighborhood of $1,050 less to passenger than to freight.

Q. And this, too, becomes a factor in the division of the most important items in this table upon which you disagree with the Northern Pacific, does it not?

A. Yes, sir, it becomes a factor there.

Q. Now, that leaves of the $620,171,139 in this item $71,-282; how is that divided, and what kind of expenses does it cover?

A. My figure here says $71,282,959.

Q. All right, call it that.

A. That is divided upon the car-movement basis.

Q. Car mileage?

A. Yes, sir.

Q. Freight and passenger?

A. Yes, sir.

Q. Any element of switching mileage, either car or engine, used as the divisor of that?

A. No, sir.

Q. Why so divided?

A. This should be done on the car-movement basis, as these are the expenses of switching which depend on the movement of cars. This could be done more accurately were we advised of the location of the service and the number of cars, freight and passenger, handled at the different handlings, but not having this information available, we find that the car-movement basis gives a percentage of 78.55 freight and 22.01 passenger.

Q. If you had divided that the same as you did the $97,-000-plus, what percentage would you have allocated to coal?

A. 26.5.

Q. As against—?

A. As against 23.44; and there is where I made the statement that I did a minute ago that this which we speak of, fixing how much of the 60 per cent were allocated, would make just the difference in the treatment of the three per cent,

and that the difference between this 23.44 and the 26.5, in whatever account was changed there by that allocation.

Q. What are the items of expense that depend upon the number of cars moved or the car mileage while they are in trains? What are the switching expenses under this head which are divided on the car-mileage basis, depending on the distance that the cars move out on the track, not in the switch yards?

A. They are the general switchmen, whose duties or whose service have not been allocated by the Northern Pacific road.

Q. The switching crew is made up of the enginemen (fireman and engineer) and three other men, one of whom is known as a foreman and the other two known as helpers, one being the follower of the engine and the other the "field man;" that is the ordinary standard crew of switchmen on the Northern Pacific, is it not?

A. It is, on the ordinary roads, and I suppose, on the Northern Pacific. That is about the make-up of a yard crew.

The MASTER: Engineer, fireman, foreman and two assistants?

Mr. BUTLER: Yes, one of whom follows the engine, and the other of whom is the field man, out among the cars.

Q. Now, this relates to switchmen, as I understood you, as distinguished from the enginemen?

A. Yes, sir.

Q. And you divide between freight and passengers the salaries of the switchmen, the foreman and his two helpers engaged in the switching crews at the terminals, on the basis you have just described, to-wit, the road-car mileage, distinguishing from switching-car mileage?

A. Yes, sir, for the non-allocated portion.

Q. That is to say, this division includes the thing to be divided, the salaries of the foreman and his helpers, in all crews who spend a part of their time in the freight and a

part of their time in the passenger business?

A. I should judge that that would be it. I couldn't tell, but it is the non-allocated portion which I should judge would be that portion, sir.

Q. And that attributes just as much switching to one kind of car as it does to another, without regard to train-run or anything else?

A. Yes, sir.

Q. It depends on where it goes, doesn't it? That is, a car switched to go to the Pacific Coast would take about a thousand times as much of this expense as one switched to go to Stillwater?

A. One hundred times, yes, sir.

Q. You think that would be right, do you?

A. Just a moment, now. That has been divided, sir, upon the car movements themselves.

Q. What do you mean by that?

A. I mean the number of cars handled; which was arrived at, and compelled to be arrived at, by computation.

Q. Then, as I understand it, the $71,299.50 included in the $134,171.80 common expense in item 5, was divided not on the basis of car-mileage as shown in your Table No. 3, but was divided upon the basis of the number of cars that were switched, comparing the number of freight cars with the number of passenger cars; am I right about that now?

A. Yes, sir.

Q. The whole of the $71,299.50?

A. Yes, sir.

Q. That is, on the cars moved; so you would get as much for switching a car that went to White Bear lake as you would for one that went to Puget Sound, wouldn't you? on this division that would all be treated alike, counting the cars handled?

A. Yes, sir.

Q. And count just as much for handling a freight car as a passenger car?

A. Yes, sir.

Q. Are you clear that you did not, in your direct examination, testify that this item of $71,000-plus was divided on the basis of car mileage in accordance with your Table No. 3? I have it so noted; I may be in error.

A. I may be in error on that myself, as I started to make that statement to you but just a moment ago, until my eye caught this figure on my statement here.

Q. Well, now, which time were you right, the last time?

A. On this last time I am right, as I used the car movement for that non-allocated portion.

Q. You mean you used the number of cars?

A. The number of cars, the car movement, not the car mileage. If I so stated, it was an error on my part to so state in my direct examination.

Q. I would like to ask you,—as we follow your direct examination we make this division of the common items under item 5, 76.56 per cent to freight and 23.44 to passenger; we can't check that figure from your testimony and we would like to have you bring in the computation upon which you made that. Our difficulties may have arisen from the fact that we read your testimony to be that you divided this $71,000-plus on car mileage rather than on the number of cars, but notwithstanding that, as it is the hour of adjournment, I would like to have you bring that in.

A. I have it here on the book.

Q. Explain it to Mr. Johnson, will you. He will understand it.

Adjourned until Tuesday, June 29th at 10 A. M.

FEDERAL BUILDING, St. Paul, Minn., June 29, 1909, the hearing was resumed at 10 o'clock A. M.

CONWAY W. HILLMAN,
recalled for further cross-examination, testified.

By Mr. BUTLER:

Q. That there may be no doubt about our understanding of the division of the common items in account No. 5 on your table 4, switchmen and watchmen, I understand that the $62,939.80 was divided 73.5 per cent to freight and 26.5 per cent to passenger, the division being made on engine milage, switch-engine mileage included, and attributing of the switch-engine mileage five per cent to the passenger business.

A. Yes, sir.

Q. And that the balance of the common items in that account of $71,299.50 was divided 76.56 per cent to freight and 23.44 per cent to passenger.

A. Yes, sir.

Q. And that the basis of the division was the number of cars switched, freight and passenger.

A. The number of cars handled, you might call it, supposing that all cars participated in the switching movement.

Q. This item includes the pay of the switchmen, the foreman and the two helpers?

A. Yes, sir.

Q. The division between freight and passenger, therefore, depends upon the quantity of work done by these crews engaged in common business and the amount done in the passenger business and the amount done in the freight business?

A. Yes, sir.

Q. You hold, do you not, that the car is the unit, or the number of cars switched, are the units of service?

A. Yes, sir, for this portion of the—

Q. For this particular item?

A. Yes, sir.

Q. So then your division indicates that of the 100 per cent of number of cars switched 76.56 per cent are freight cars and 23.44 per cent are passenger cars?

A. Yes, sir.

Q. That would indicate that about one-quarter in number of all cars switched were passenger cars, would it not?

A. Yes, sir.

Q. Now, when you are dividing switch-engine mileage between freight and passenger business, you allow 1/20 of the mileage of switch engines to the passenger business to do one-fourth of the total switching, measured by the number of cars switched, do you not?

A. I do not see the percentage exactly that way, Mr. Butler.

Q. Of the total switch-engine mileage 5 per cent is attributed to the passenger business?

A. Yes, sir.

Q. Of the number of cars switched you have just told us that 23.44 per cent are passenger cars; therefore 1/20 of the switch-engine mileage does about one-fourth of the total switching, measured by the number of cars, assuming that it is just as much engine work to switch one passenger car as it is one freight car?

A. Yes, sir, on that basis that would be correct.

Q. You think that is right, do you?

A. Yes, sir, that is the way the table is made up.

Q. I know it is, but do you think that that assumption is right,—that 5 per cent of the switch-engine mileage will do 23.44 per cent of the switching business, as a matter of fact?

A. That seems out of proportion, in the way you put it.

Q. Then your assumption that 5% only of the switch-engine mileage is attributable to the passenger business is wrong, is it not, and it ought to be 23.44%?

A. No, sir, I think not.

Q. Why not?

A. For the reason that in these factors of the engine mileage which we have had a large proportion of the switch-engine's time is taken up in the switching of freight cars. This proportion does hold the relation very probably of 5% of the total

Q. Well, why do you say very probably? If you count the number of cars it would be 23.44 per cent?

A. Not all of the cars are handled by switching engines; that is, in making up a freight train you handle the cars much more than you do a passenger train, and that this percentage has been variously worked out from 5 to 8 per cent, as far as my experience goes. In making the second division, of the amount left over after the rest has been divided and allocated, I have used the factor which is based upon the car movements directly. This assigns, as you have stated, 23.44 per cent to the passenger percentage, and that 23.44 per cent should be taken in connection with the total engine mileage switching included. It is very possible in this case that I should have retained also this 5% in the division of this expense.

Q. This item does not cover any switching done by train crews, does it?

A. Only as the allowance is made for switching on the line of the road; that is, original switch-engine mileage.

Q. Does item 5 include any expenses for the switching done by traincrews?

A. No, sir.

Q. It only includes expenses of switching crews?

A. Yes, sir.

Q. And only a part of the expenses of switching crews?

A. Yes, sir.

Q. The division of the $71,000-plus is made on the basis of the number of cars switched, and that is what you meant in your recent long answer where you referred to car movement, isn't it?

A. No, sir; as I explained, I have taken the number, as nearly as I could ascertain it, from the reports of the Northern Pacific; I have taken the number of freight cars required to handle the freight and the number of passenger cars required to handle the passengers, and have taken that as the basis of what I term here the car movement.

Q. Those figures appear on your Table No. 3, do they not?

A. No, sir, they wouldn't appear in my Table No. 3.

Q. Did you not, in your direct testimony, testify that you divided this item of $71,000-plus between freight and passenger on the basis of the car movement, taken from that Table No. 3, by which we understood car mileage, until about adjournment time last night, when you told us it meant the number of cars switched?

A. I think it is very probable that I did make that statement in my direct testimony, taking the—

Q. Now, give us the figure. So there are no figures on Table No. 3 which you used for the division of this item of $71,000-plus, are there?

A. No sir, there are none there that I used for that.

Q. Now, you did, as a matter of fact, (I have refreshed my recollection since adjournment last night) in your direct examination, testify that you divided this item on the basis of car movement, taken from Table No. 3?

A. Yes, sir.

Q. Now, what numbers did you use? Did you take all the freight cars of the Company attributable to the freight business in Minnesota and all of the passenger cars of the Company attributable to passenger business in Minnesota, or did you take the amount of switching that was done?

A. I took the number of freight cars which, according to your annual report to the Commission, (page 61-A,) were required to move the freight mentioned thereon and the number of passenger cars to move the passenger trains. I was led into

that error there by a careless glance at my notes here and not referring to them closely enough.

Q. How many freight cars did you take?

A. 530,400.

Q. That is the number of freight cars attributable to the business of the Company in the state of Minnesota?

A. Yes, sir.

Q. How many passenger cars did you take?

A. 162,400.

Q. How many passenger cars?

A. 162,400.

Q. How many passenger cars has the Company got?

A. I do not know, sir.

Q. Did you assume that, in the freight business, the Northern Pacific on the average uses 530,400 freight cars in Minnesota, and that on the average, to conduct its business in Minnesota, it used 162,400 passenger cars?

A. Yes, sir, I took those figures deduced from page 61 of your annual report to the Commission.

Q. Doesn't that seem like a large number of passenger cars for a thousand miles of road?

A. That, of course, represents the number of times that one car would be used over and over again, according to its train handlings, you understand, of course; it does not necessarily mean that you have 162,000 cars.

Q. What does it mean then?

A. It means that a passenger car was used 162,000 times.

Q. One car was used that many times?

A. Yes, sir.

Q. Used how?

A. On a train.

Q. And freight?

A. The same way; one car would be used 530,000 times.

Q. Now, you think the number of times that a passenger car

is used or the amount of use of one passenger car on a branch or on the branches, (and the car doesnt go to any point at all where there is a switching crew,) is a proper element in the basis of division of the pay of switchmen in switchingcrews in a common yard?

A. It would necessarily depend upon the car movements as a general proposition; and in default of the more accurate knowledge of the handling of cars at switching points, it would be the most satisfactory factor which we would have for that purpose.

Q. Do those figures given make the percentage? Have you verified that since last night, to-wit, 23.44 and 76.56, when you used it today?

A. Yes, sir, I think that is correct.

Q. Did you figure that out last night?

A. I figured it out this morning, I believe. Of course, you understand that these figures are derived directly from this page 61-A in the annual report, and I might say it is therefore an assumed figure; though from the factors I have used there, there might be slight discrepancies in that owing to not carrying certain percentages out to a string of decimals, but they are practically correct.

Q. This means the number of times that the cars were put into a train, does it?

A. Yes, the use of a car in the train.

Q. So it would give to a car that was put into a train to go out to White Bear lake the same potency in this division as if the car were to go to Pembina or Seattle; it would be just one car used once, wouldn't it?

A. Yes sir, the method of handling was determined for the number of passengers per car in the state of Minnesota.

Q. What is that?

A. The method used was to determine the average number of passengers per car in the state of Minnesota, and then divide

the average number of passengers per car into the number of passengers in order to obtain the car use.

Q. I don't understand the connection your present statement has with the inquiry. Does the number of passengers per car, per train, per mile of track, or any other way, enter into this division of the pay of the switchmen, foreman and helpers?

A. That factor is only used, as you understand, to determine this 162,400.

Q. Oh, yes.

A. That is all.

Q. Then it is not the use of the car, but the number of people that rode in it?

A. No, sir; I had to use the factor of the number of passengers per car in order to derive what you might call the passenger-car use; that is, the number of times one car would have to be used to handle that many passengers; I mean it was handled that way.

Q. Well, that would be the same thing, would it not, assuming the average loading that you give in this matter of division the same potency, because it would be the use of a car once to haul it from St. Paul to White Bear lake as from St. Paul to Seattle?

A. Yes sir, it would be practically the same thing.

Q. And the item to be divided was switchmen at terminals, switchingcrews at terminals?

A. Yes, sir.

Q. And you think that a sound and reasonable basis for division of switching expenses?

A. It is a fair basis, yes sir.

Q. Do you think that the fireman's salary ought to be divided on the same basis as the foreman's in a switching crew, as between freight and passenger in the state of Minnesota.

A. Yes sir, that should be practically the same basis.

Q. Did you, as the figures are handled?

A. Practically, yes sir; there is a slight difference in the division there.

Q. Should the engineer's salary be divided the same?

A. Yes, sir.

Q. Fuel of switchengines,—should that be divided the same?

A. Yes, that would practically come in the same division.

Q. Lubricants of switchengines?

A. Yes sir; all those expenses come in the same division.

Q. Switch-lights and the oil for them in switch yards?

A. No, sir.

Q. That should not be the same as the fuel for the locomotives?

A. No, sir.

Q. Why?

A. Because it does not depend upon the same class of movement.

Q. In what item do you find the items for the foreman's salary, the fireman, engineer, fuel, oil, waste and switch-engine supplies?

A. Account No. 21, engineers and firemen; account No. 23, fuel for locomotives, and Nos. 24 and 25, oil, tallow, waste and other supplies.

Q. You handled that the same as if it was a train-movement item, did you not? You called the engineer and fireman and fuel and supplies for the switch-locomotives a train-movement item, did you not, and handled it that way?

A. You are now referring to the division between inter and intra, or freight and passenger?

Q. To freight and passenger.

A. No, sir; the item of 180,123 comes in a different connection.

Q. Well, sir, tell me just how you divided that and why you should not divide them both on the same basis, the switchman who rides on the engine with the foreman and the fireman who

puts the coal under the boiler; if one is a train-movement item and should be divided one way, why not the other? If one should be divided on the basis that you state this morning that the division was made, why shouldn't they go together?

A. I will read from my notes, if you will allow me, on that point. The next item is fuel for locomotive and is allocated and shown in column No. 5.

Q. Allocated between freight and passenger?

A. Yes, sir.

Q. How do you divide the fuel and switching locomotives?

A. The entire amount of fuel for locomotives is allocated by the Northern Pacific Railway Company and that allocation accepted.

Q. Between freight and passenger?

A. Yes, sir.

Q. On what basis do they allocate it?

A. I do not know.

Q. Well, you know, do you not, that switch-engines or switch-yards, both freight and passenger cars, and a switching crew that switches both freight and passenger cars, cannot be allocated directly by the Northern Pacific Railway Company or any other railroad company, that there must be some basis of division?

A. It is very probable that they did use some basis of division, but I have accepted the allocation which they have made of fuel and also of their engineers' service.

Q. You accepted the division, you mean, do you not?

A. The division or the allocation?

Q. I am speaking of the common items.

A. There were no common items, according to my records, on their books.

Q. Well, did you think their books were right, if that is true, on fuel for locomotives and lubricants and firemen and engineers?

A. As they had to make a report to the State and also to the Interstate Commerce Commission on that subject, showing the amount of fuel consumed by passenger locomotives, freight locomotives and switching, and as they had marked on their books the entire amount allocated, I accepted it, sir.

Q. And did they not so mark item No. 5, switchmen?

A. As I have stated,—

Q. Are they not marked on their books the same way?

A. As I stated, $444,000 of that expense was allocated between freight and passenger.

Q. And the balance divided by the Northern Pacific on what basis?

A. I do not know. Probably revenue-train mileage. The $444,000 is the total expense; allocation is $310,672.05.

Q. That left $130,000-odd to divide, and how did the Northern Pacific divide it, do you know?

A. I suppose on the revenue-train mileage basis. I didn't examine how they did it.

Q. Was that one of the methods of division that is obsolete?

A. I rather object to using that term "obsolete" though I have used it myself. I used that term to mean that, for the purposes which I had in view, of a correct and a practically correct basis between freight and passenger, these methods of the Northern Pacific no longer applied. The choice of the term "obsolete" was a little unfortunate.

Q. Do you want to strike it out?

A. No sir, not with the explanation that it is not a reflection; but that it is, for these purposes, a past number.

Q. Did you examine the vouchers to see what the expenses were properly chargeable to freight and passenger engines, to switch engines, freight and passenger?

A. No, sir.

Q. Now, did you try to ascertain how much fuel was used in switch engines?

A. No, sir.

Q. Or how much it cost?

A. No, sir, I allowed the allocation to remain.

Q. Did you mean allocation?

A. Yes, sir.

Q. Or how much the wages of the firemen and engineers engaged in common switching was?

A. No, sir.

Q. That would make a great difference, would it not?

A. I don't know, without going into details and computing that from their rolls, how much difference it would make.

Q. You accepted their figure of the division of all these items?

A. I accepted their figures.

Q. This division of your item No. 5, of which we have been speaking so much, becomes itself a division on a fiction in addition, does it not?

A. Yes, sir.

Q. Did you follow the Wisconsin method of dividing [illegible] telegraph expenses—Prof. Myers' method?

A. Yes, sir.

Q. Are the conditions on the Northern Pacific in Minnesota the same as the conditions in this regard upon the Milwaukee in Wisconsin, as regards the freight service and the passenger service and telegraph service, and their relation to either or both?

A. As far as this division goes, I would follow his method; I would not use his percentages.

Q. Did you use his percentages?

A. I would have it not upon the percentage which Prof. Myers speaks of in the Knoll decision, but following the same method that he did, so that on each road the division would be different, you understand, depending upon the conditions.

Q. Do you know whether you used the same percentages as he did in this instance or not?

A. I didn't examine it to see; I do not know; I should think so. They would be different because a different road.

Q. You took this whole item and attributed one-half of it to commercial business and one-half of it to train operation?

A. Yes, sir.

Q. And you divided one-half of it on the same basis that the Northern Pacific did, didn't you?

A. On the revenue-train mileage, yes sir.

Q. That is the same basis that the Northern Pacific did, isn't it?

A. I believe so, yes sir.

Q. And the other half you treated as a general expense and divided it on the basis of the divisions of items 2, 3, 5 and 9?

A. Yes, sir.

Q. How did you get the first fifty per cent?

A. That is an arbitrary division.

Q. Why at fifty per cent? Did you examine the duties performed by the men and the functions performed by the instrumentalities, between the two classes of business, train movement and commercial movement, and get any facts upon which you could make the division fifty per cent to the train movement and fifty per cent to the commercial business?

A. No sir; I follow the Wisconsin method in that and assign 50.

Q. I thought you told me you didn't know what their percentages were on that.

A. I thought you were referring to the total result under their method, by which when they end the entire account, we had to add a certain percentage to passenger and a certain percentage to freight.

Q. Now, the commercial business relates to the transportation of people or of freight, to a great extent, does it not?

A. Necessarily that would be the business which would be left over for the train-movement item.

Q. So I assume two kinds of telegraph business, one train movement, for both freight and passengers together, the other is what you call commercial business?

A. Railroad commercial, yes, sir.

Q. Some of it relating to the freight business of the Company or the transportation of freight on its line and some of it relating to the transportation of passengers, and that covers the commercial business of the road?

A. Yes, sir.

Q. Now, could you give to the Master any facts or reasons why you should take 50 per cent instead of 75 or 25 for the train movement?

A. No, sir, I have no figures to back, (you might say,) that division.

Q. So the flipping of a penny or any other hazard or chance would be as good a way, as far as you know, to divide 50 per cent to the train movement and 50 per cent to the commercial business, would it not?

A. Hardly that strong.

Q. Almost?

A. I followed the analysis where Prof. Myers had assigned that amount and, in default of any other information on the subject or any other facts, I took his assignment of 50 per cent.

Q. And the result is that in dividing half of this expense, No. 8, between freight and passenger, you attribute 86.13 per cent to freight and only 13.87 per cent to passenger, by the combination of your divisions of items 2, 3, 5 (all of which we have heretofore mentioned) and 9—which is yet to come.

A. That is, for the one-half?

Q. Yes.

A. The second half of them.

Q. Yes. The percentage on the other half being 54.8425; that is, the train-mileage basis employed by you in one-half attributes over 42 per cent to the passenger business?

A. Slightly over 45 per cent.

Q. But to the commercial business, both freight and passenger, and depending upon it (assuming the 50 per cent arbitrary because Prof. Myers did) and dividing on the combination basis of the divisions of 2, 3, 5 and 9, you bring down the passenger percentage of the other half of the telegraph to 13.87?

A. Yes, sir.

Q. A little less than one-third, between a third and a fourth?

A. Yes, sir.

Q. Did the Northern Pacific allocate any part of this item No. 8, leave a part directly allocated and a part to be divided?

A. They allocated $904.84 to freight and $523.07 to passenger.

Q. You accepted their allocation?

A. Yes, sir.

Q. Did you find out where those expenses were incurred?

A. No, sir.

Q. Or what they were?

A. No, sir.

Q. Didn't pay any attention to that item except to see what it was and adopt it?

A. Correct.

Q. Does this item include the salary of night-operators at country stations?

A. It would include a portion of their salaries, assigned by rule of the Northern Pacific to the telegraph expenses and the other part assigned to the station expenses.

Q. What part each way?

A. I do not recall now without reference to the Northern Pacific instructions.

Q. Did you make any determination to see whether their use and division was right?

A. No, sir, I accepted it.

Q. That is a right way to do, is it? I mean it is the right way to charge some of it to the station agents' account and some of it to the telegraph expenses?

A. Yes, sir, the night-operators' duties are various, and the station agent, as a general thing, is not on duty at that time of the day. He would be employed in other matters, which would necessarily or probably be the duplication of the station agent's work, as would be required after the station agents had gone at night.

Q. And how that should be divided between freight and passengers and between station agents' account and telegraph account would depend, would it not, upon conditions—what the man did, what made it necessary for him to be there at all, all those things?

A. Yes, his service, like any other service of a similar character, would depend upon the necessity of his being present.

Q. It probably would not be necessary to keep a night-man at all, would it, for commercial business, in most of the country places?

A. No, if the trains did not move that man would probably not be there and the day-operator would have to handle that commercial business during the day; but, as a matter of fact, a large amount of commercial business is done over the night-wires, when the wires are not so busy, for train movements.

Q. These operators often light the signal-lights around the station and yards, do they not, sell tickets, light the signal-lights, and all that?

A. Yes, sir, that is the reason that their full pay is not assigned to telegraphic operation, but that some of it is in "station expenses" and "station employes."

Q. And that some of it has been divided, as you have stated, in the other accounts?

A. Yes, sir.

Q. But the rest to be divided is only the telegraph items?

A. Yes, sir, the telegraph item.

Q. Now, in your former items you have the repairs of furniture, have you not, settees in the waiting rooms, the pay of men watching crossings, men watching tunnels, men watching docks, switchmen, switchmen's helpers, and all the multitude of items that are embraced in those other accounts?

A. Yes, sir.

Q. And you used them as a basis (those that I have mentioned) for dividing this arbitrary 50 per cent of the telegraph expenses which you have charged to the commercial side of it?

A. Yes, sir.

Q. And think that is right?

A. Yes, sir.

Q. What relation has the repair of a settee in waiting-room to such expense?

A. It so happens that the repairs of station furniture didn't enter into that; that the station supplies did. If you wish to transfer the question to station supplies—

Q. Item 3 is on the same basis as 2, is it not?

A. Station furniture is No. 4.

Q. Well, No. 4. Well, I will ask you what relation has the services of switchmen engaged in a freight switchyard to the commercial side of this telegraph account.

A. The telegraphing is, of course, of a very mixed nature; it refers to all kinds of freight, regarding its disposal and regarding the amount of the freight; refers to the same concerning passengers; it refers to the switching, getting out a certain car, the orders to the switchmen with reference to this point of movement of trains, which would necessarily involve, to a certain extent, the switching expense and relate itself to that. It could not well be analyzed unless you would analyze all the messages which were sent; it would be almost an impossibility, and therefore the items which are directly affected by those

messages which are sent are the ones which I have named; at least the bulk of them.

Q. You think that is a sufficient relation to justify it as a rational and an accurate element in a divisor?

A. Yes, sir.

Q. Would the fireman's pay on the switch-engine be just as good, or the fuel in the locomotive?

A. Hardly.

Q. Well, why wouldn't the fireman be just as good as the helper who rides with him on the engine?

A. If he were in our yard expenses and divided on our switching basis, we could include him in that.

Q. It would be just as good, wouldn't it, if it was convenient to do it?

A. No, sir. Do you mean the discarding of the switchman or—

Q. Yes.

A. —to include him?

Q. To include the fireman and engineer would be just as much related to the matter, would it not, as the rest of the crew in that switching crew?

A. Yes, sir, if he were in there.

Q. Now, what relation has the man who watches a dock or a tunnel or a crossing, or a freight-house to keep people from stealing, what relation has that class of business to the commercial side, has it any?

A. He would undoubtedly receive some telegrams, or telegrams would be sent concerning his duties.

Q. Well, don't you think the engineer—there would be a good many more sent concerning the train conductors, (concerning the train conductors' duties) than there would the fellow with a red flag in his hand at a crossing?

A. Undoubtedly.

Q. But you didn't use the train conductors as an element?

A. The train conductors are included, if you will recollect, in the 50 per cent of train movement, and also the portion spoken of, fireman and engineer.

Q. Then, if a telegram was sent to a conductor to go over the road, that would be a train-movement item?

A. We would consider that in this train movement.

Q. But if it was one to a watchman standing at the crossing of the railroad with a flag in his hand to help the train get by in safety, that would be a commercial item, would it?

A. As we have considered it, yes, sir; he is in the yard.

Q. You think that right, do you?

A. That would be a fair division.

Q. Do you know how Prof. Myers' per cent came out on the half?

A. I do not know, sir. I have read it, of course.

Q. You didn't follow it any more closely than—

A. I have followed it closely, but I haven't kept those figures in mind. In the mass of figures I am compelled to keep in my mind, I erase them from it as soon as possible and prefer to refer to my notes.

Q. You think that the same amount of train-movement telegraphing is required per mile of a freight train as per mile of a passenger train?

A. I think that would be a very fair division.

Q. About how much track is at all times chargeable to the ten-minute-class fast-moving passenger train on the main line?

A. I don't understand that question at all.

Q. Well, you have to keep trains a certain distance apart, as a matter of safety, do you not?

A. Oh, I understand that, yes, sir.

Q. And freight trains have to get out of the way of passenger trains, don't they?

A. Yes, sir.

Q. And they have to be telegraphed to in order to do it, don't they?

A. They are compelled—I haven't followed the rules, but under the old dispatching rules, freight trains were compelled to be out of the way of all passenger trains ten minutes, with possible variations of a watch at 5, making 15 minutes that they had to clear the track for passengers.

Q. So we will say there are two stations 30 miles apart and another station somewhere in the middle, that rule would require 30 miles at all times, for that passenger train, would it not, to keep everything else off of all parts of it, a train moving under a fairly ordinary schedule, because the local trains are faster between stations than the others; isn't that true?

A. I don't see that deduction.

Q. A freight train going in the same direction wouldn't enter the block ahead, would it, going down to the ten-mile or fifteen-mile point? he would be held to let the passenger train go by at that point, wouldn't he, because it might be overtaken and telescoped if he didn't hold it; isn't that true?

A. No, sir, it wouldn't be held unless the road was operated by a block-signal system; it would then be held.

Q. Well, it would be held unless there was time enough. Here is a way-freight trundling along to the West; it gets at a station; the next station west of it is ten miles away; here comes along the North Coast Limited behind it; now, unless that freight train has the time to make the next station and get into clear, it is held, is it not?

A. The next siding, yes, sir.

Q. So that holds up that place, does it not?

A. Yes, sir.

Q. Now, no other train can come in the other direction to that station, either, unless it has time enough to get in; isn't that true?

A. Depending upon which train has the right of way, of course.

Q. Assuming it to be a freight train and that passenger trains have the right of way against all freight trains—

A. Assuming it to be a freight train, yes, sir.

Q. That is true, is it not?

A. Yes, sir.

Q. So that, as a practical matter, this telegraphing is to keep these trains out of the way of the passenger train and not for the haulage of freight at all, isn't that true? You have divided the freight-movement-telegraph-cost on a straight mileage basis, have you not?

A. Yes, sir.

Q. Do you think that contributes enough to passenger?

A. Yes, sir, sufficient.

Q. Well, fairly enough, do you?

A. Very fair. You must remember that in train movements it is reciprocal, that a large amount of telegraphing would be where the North Coast Limited (which you have quoted) would be late; the freight train would be helped over the road and given time and as they came, in the dispatching they would be allowed 20 minutes on the passenger train's time; they are frequently allowed time at passing points in order to clear the road where there would be a congestion or blockade, as the dispatcher directs, even to the extent of holding the Limited for them for a few minutes, and ordinarily to the extent of holding a minor passenger train—not so much the Limited, (which would be given considerable preference) but where you come to a minor train they would frequently hold a way-freight 8 or 10 minutes in order to facilitate the movement of the freight over the road.

Q. You examined, in the case of the Northern Pacific and found that they had held up the Coast trains?

A. No, sir, I know that from experience, for several years as

train-dispatcher myself on the Cumberland Valley branch of the Pennsylvania road.

Q. When?

A. In 1879 or 1880.

Q. Thirty years ago?

A. Yes, sir.

Q. And that is the basis for justifying your common division on a train-mile basis of this item, is it?

A. Train miles; yes, sir, trains are still late and still have delays.

Q. Still hold passengers to let freights go by?

A. Not as a general rule.

Q. No, but assuming that they don't do that at all but that they hold the freight train when anything has got to be held, then is that division right, on the train-mileage revenue basis?

A. I should still adhere to the train-revenue basis.

Q. So it wouldn't make any difference which train was held, would it?

A. No, sir.

Q. It wouldn't make any difference what the telegraphing was on account of?

A. No, sir.

Q. Whether freight or passenger. Is not train-mileage related, in some degree, at least, to all of the telegraph operating expenses? You have just told us that the commercial side, some of it, related to freight and some of it related to passengers,—I mean in some degree, I don't mean directly all together.

A. Oh, yes, train-mileage enters into almost everything you have on the road in some way or other, and is related to it, but in making the allowance for the 50 per cent, I think it has been sufficiently allowed for in all respects.

Q. But it is related in some degree to the other 50 per cent, is it not?

A. Yes, undoubtedly there is a relation.

Q. Now, if it be related directly and immediately to the 50 per cent of it, is not train-mileage a better basis of division for the whole of it than the wage of a watchman at docks or in a tunnel or a man trucking freight in a freight-house or the janitor who sweeps the waiting-room—all of which elements you have used for the division of the other half?

A. You must recollect that I have not used those elements as you have mentioned. They are included in the total items in the division of the 50 per cent. If I used only those items which you have singled out, it would undoubtedly be an incorrect basis, but I have taken all of the expenses, including those men who sometimes do receive telegraphic orders, without a doubt, and who sometimes receive commercial messages even though they are only sweepers, even though they are tunnel men,—all these men receive instructions concerning the handling of their freight, they receive instructions as to what they shall not do or shall do, and in that way I think that they are legitimately entitled to a recognition of this point in toto but not by carrying them out as an item upon which I have based a division solely.

Q. Why not consider the wages of a roundhouse foreman or a road foreman as well as those that you did consider?

A. There are a number of men who do receive messages and instructions such as I have mentioned all through the other expenses.

Q. Yes, and a roundhouse foreman and a section foreman and a road-master are very much more apt to receive these messages touching their duties, are they not, than many that you did include?

A. The bulk of the commercial telegraphing would be upon the items that I have mentioned. There are a number, as I have said, of other items which would require such a detailed analysis to excerpt them from the mass of other expenses with

the probabilities (or with the chances, if you prefer the term,) that the result would not be materially changed that we could fairly make this division. If you will note, on what you speak of, the road foreman, the maintenance-of-way-and-structure expenses—

Q. And of equipment?

A. —and of equipment—

Q. Telegraphing all enters into that, doesn't it?

A. There would be not very much telegraphing concerning the equipment; there would be some, however, but if you will notice that in the division of freight and passenger the percentages which are assigned on those two accounts are not very far from the percentage to come—

Q. I am not asking you how it would come out, I am asking you for the justness of the basis. The fact that a division will come out this way, that way or the other, to suit my purpose or somebody else's, is no reason at all why it is a good way to divide, is it?

A. Yes, sir, very frequently we look over these items to see if they would materially change the result, and it might be that we would deem it necessary to include them.

Q. Well, if I were looking for a good basis to divide on and were pursuing simply the exact truth about it, I wouldn't care what the percentage would be and I wouldn't look it over to see how it would come out before-hand,—would you?

A. No, sir, I wouldn't look it over to see how it would come out. I would look it over in this method to see whether the percentage of division which you were obtaining on that special item was such as would really pay you for the use of excerpting. I will say, however, that I did not do this in this instance; I simply took those four items.

Q. And you considered the half of it as a general expense, you testified in direct, half of the telegraphing?

A. As a commercial business, yes, sir.

Q. And treated it as a general expense. Did you not so testify?

A. That is my recollection.

Q. Now, I wanted to ask you, if a general expense why didn't you divide it as you divided other general expenses?

A. If I used the term "general expenses" in that, I meant an expense (as I have stated here) which was general to those four accounts which we have mentioned, not in the nature of a division of general expense items down below.

Q. If you should take it on the basis of general expenses you would get a very different result, would you not, and thereby a very much larger amount to the passenger business?

A. Yes, sir, but I would not do that. If I used the term "general expense" on that, I used it in the sense that I have in the commercial telegraphing, which was to a certain extent general in its nature. I did not use that term "general" to refer to this division of general expenses below here, nor intend it to be used as such though I may have used the term.

Q. Now, No. 9 is another item, I think, which we differ about somewhat in the proportion of "operating expenses of terminals"?

A. Yes, sir, differ slightly there.

Q. There is a credit item of $6,152.05.

A. Yes, sir.

Q. And you divided that on the basis of the allocated items?

A. Yes, sir.

Q. On the ground, as you told us, that this credit tends to reduce the cost of the terminals?

A. Yes, sir.

Q. You investigated and found out just how that credit item arose, did you?

A. No, sir.

Q. Or did you find out how the debits from which the credit of $6,152.05 originated were distributed?

A. No, sir.

Q. Now, if they were distributed on one basis—on the revenue train mileage basis—don't you think that would be a better division than some other [illegible] basis?

A. Decidedly not, sir.

Q. You think it would make no difference about the method of distribution in making up the items at all?

A. No, sir; as long as the total expense was allocated, you understand, and accepted as allocated, it is but fair that that should refer upon the basis of the total allocation.

Q. But it wasn't allocated, it was distributed on the basis of train mileage.

A. The original expense was not, and that is to what I am referring now. The original expense was allocated.

Q. For joint yards and tracks; they spent the money and charged it to the common and divided it up on train mileage basis, got the money back from the other people who were interested in the joint operation; now, that being true, should not your division be on the train mileage basis instead of on some other basis?

A. The division of the original expense is allocated by the Northern Pacific and shows an expense of $[illegible] freight and $48,229.62 passenger. That is not divided on the train mileage basis. There is a method of allocation there between freight and passenger. Now, it is but correct that whatever money is received back should not bear the revenue train mileage basis prorata for reduction from those amounts.

Q. Which one would they charge to?

A. The freight or the passenger business.

Q. On the train mileage basis?

A. On the train mileage basis; the credit to the passenger business would be large—

Q. Be too much, wouldn't it?

A. —and therefore the expense of the passenger would be

reduced from the figures which I have given. You will readily understand that, in this case where the allocation has been made and a credit comes back to that account, this credit should be upon the basis of the allocations and not upon a straight revenue-mile basis, as the original expense was not made on that basis.

Q. But if the debit from which this credit was derived were distributed on a train-mileage basis—

A. And I accepted that, we should certainly accept the reverse in the credits.

Q. And distribute on a train-mileage basis, shouldn't you?

A. We should on that basis.

Q. And if that was the fact here, you were wrong, were you not?

A. No, sir, because it could not be the fact

Q. Couldn't be the fact?

A. No, sir; not revenue-train-mileage basis as it is used here.

Q. What do you mean by "as it is used here"?

A. As it is used in the division of the credit; whatever factor you use in allocating between freight and passenger is debited to that account.

Q. Should be used on the other side of it?

A. Should be used on the other side of it.

Q. And that is what you have done, isn't it?

A. And that is what I have done, exactly.

Q. On which you divided—on the basis of allocated items?

A. That is exactly what I did, divided on the basis of allocated items. The expenses are allocated by the Northern Pacific. Now, they come to a credit to this account. Instead of following their allocations, they drop back to the revenue-train-mileage basis and make the deductions, when their deductions should be made on the basis upon which the expenses are incurred or they should allocate those credits, one or the other.

Failing in the allocation, it is necessary for us to follow the allocation in the original accounts.

Q. The allocated items were items that were derived from exclusive joint freight yards or exclusive joint passenger yards, and the unallocated items arose from joint common yards, did they not? Isn't that the way it arises? The Minnesota Transfer would be exclusively freight and allocate all of that proportion of that terminal to freight; the Duluth Union depot passenger, allocate all of that to passenger; now we come to one that has both: The Minneapolis & St Louis at Minneapolis, the Northern Pacific track from here to Minneapolis used by the Minneapolis & St Louis is another joint. Now, when you come to the common items, what relation has the freight expenses at Minnesota Transfer or the passenger expenses at the Duluth Union depot to the joint expenses, the common expenses, the trackage used for both jointly with some other company?

A. If that is the nature of the item, the Northern Pacific books do not show it distinctively, and in that case it should be allocated.

Q. Well, that is what you did do, you did allocate it, didn't you, on the basis of the allocations in other yards?

A. I divided it on the basis of the allocation, yes, sir.

Q. Well, then, you say it should be allocated?

A. Yes, sir.

Q. Well, how are you going to do that in a joint yard, joint terminal owned by the Northern Pacific Company and used by the Minneapolis & St Louis Company, and they pay in $6,000 or such a matter for running freight and passenger trains over the Northern Pacific property in question; how are you going to allocate that?

A. That would be a subject of division and not allocation, if such a state of affairs was found.

Q. What would be the right basis of division between

freight and passenger?

A. It would have to be divided according to the use of the track.

Q. And the use of the track would be measured by the number of freight trains that went over it for the freight use and the number of passenger trains that went over it for the passenger use, would it not, and that would be train mileage, wouldn't it?

A. We would have to go into that division as we have gone into all the rest of it, sir.

Q. Well, the use of a track is measured, is it not, by most all of the railroad companies that you know anything about in this problem of division, on the basis of train mileage?

A. That is a very common factor, yes, sir.

Q. And recognized more than any other single factor, is it not, by the railroad accountants and railroad thought of the country and the world?

A. Yes, sir.

Q. And that would be a good way to do it, wouldn't it, in your opinion?

A. No, sir, I should insist on the analysis.

Q. You disagree, then, with the whole trend of railroad accounts and railroad thought in this country and in the world upon that subject?

A. Yes.

Q. The great majority of them?

A. It is putting it pretty strongly, but, of necessity, in starting out as I have on this, I am at outs or at a disagreement, I should state, with probably every railroad auditor in the United States.

Q. Yes, or in the world, as far as you know?

A. I haven't had any experience outside of the states, sir. That is one of the bases upon which I have proceeded, that I would be at outs with them.

Q. You started to get at outs with them, didn't you?

A. Oh no, sir, but I have stated that probably a little incorrectly. I would like to say that, in starting on this division, necessarily I would cross the beaten track which had been followed so long and confessedly incorrectly and have to strike out anew for myself. I did not mean that I would start to precipitate a row.

Q. And the great line of cleavage is your weather-stress feature, in your maintenance of way and equipment account, is it not, train mileage being used by the railroad accounting thought of America for the divisions of this great mass in the whole operating field, but you divided to weather-stress a certain portion and divided the balance on train mileage?

A. No, sir; the balance is not divided on train mileage. The principal difference in that comes in the recognition of the weights moving over the track.

Q. Yes, by train use, then, instead of mileage?

A. Yes, sir, by train use.

Q. Instead of train mileage?

A. Yes, sir.

Q. And the only person that you ever heard of suggesting this weather-stress feature which becomes so important in this case never had a minute's experience in railroad accounting in his life, did he?

A. I don't know what experience Prof. Myers has in railroading.

Q. You know he has had none, don't you?

A. I do not.

Q. You never heard that he had any, did you?

A. I never heard one way or the other.

Q. He was a professor of political economics, he has been a teacher all his life in the university of Wisconsin until he was appointed on the Railroad Commission, a scientific investigator along the lines of political economy; that is his

occupation, isn't it?

A. I do not know, sir. That is a statement I will have to leave to you, sir.

Q. Now, did you ever hear of any one taking this weather-stress element as a factor—any one else than Prof. Myers—

A. No, sir.

Q. And yourself. Items 11, 12, 13 and 14, being freight conductors, passenger conductors, freight brakemen and passenger brakemen,—how did the Northern Pacific treat those accounts?

A. They allocated those.

Q. Directly?

A. They are so marked, yes, sir.

Q. All of them?

A. Yes, sir.

Q. Any mixed trains, and if so what did they do with the conductors and brakemen of mixed trains?

A. I do not know what they did with them. The probabilities are they applied the 25 per cent rule on mixed trains.

Q. Is that right?

A. I do not know, sir.

Q. Well, is it right to do so? You know that, don't you? That is, the 25 per cent rule is charging 25 per cent to passengers and 75 per cent to freight, is it not? That is what you mean?

A. Yes, sir.

Q. Is that right, on the Northern Pacific road?

A. If I were called upon to allocate that, I should investigate the matter, and I think it is very probable, from some things that I have looked up in that line but not pursued to the end, that that would be a very fair percentage.

Q. Well, you knew, didn't you, that the Northern Pacific had mixed trains?

A. Yes, sir.

Q. And you knew that there were certain common items in these four accounts?

A. That there were certain mixed-train items, yes, sir.

Q. Then you were called upon to make the division, weren't you?

A. I accepted their allocations; I was willing to do so.

Q. You then didn't make up the whole problem and determine for yourself what ought to be done, or each detail of it, but where without substantial impairment to the result you could accept what the Northern Pacific did, you followed that course, did you not?

A. In every point where the Northern Pacific stated on their books that an expense was allocated to freight or passenger, I have accepted that allocation.

Q. Well, now, Mr. Hillman, as an expert railway accountant, and knowing, as you did, that it had mixed trains, you then knew, when you came to item 11, freight conductors, 12, passenger conductors, 13, freight brakemen, 14, passenger brakemen, that there was in those items, or some of them, some common expense for men running the mixed trains, did you not?

A. Yes, sir.

Q. And you knew that that could not be allocated but must be divided on some basis reasonable or arbitrary, did you not?

A. Yes, sir.

Q. So at once the propriety of the division (not of allocation, but of the division) became important, did it not, and it was your duty, was it not, in the problem which you say that you laid out for yourself to see whether that basis was sound or whether it wasn't, especially in view of the fact of your characterization of the method followed by the Northern Pacific as "obsolete"?

A. The method which was followed in this basis, as I have

stated, was accepted as shown by the Northern Pacific, and in doing so there were, and I knew at the time there were, a certain amount of expenses which would be incurred upon mixed trains upon which the division would be more or less an arbitrary matter or an assignment and not an allocation. I did not deem it of sufficient importance to go into that matter to redivide those items. As to the matter of my duty, etc., to do so, I would prefer not to answer that but simply make the statement that I did not do so.

Q. Now, this mixed-train matter extends to other accounts, does it not, and all train supplies, engine supplies, fuel, lubricants and all that, of mixed trains, must be assigned or divided in some way between freight and passenger; none of these can be allocated, can they?

A. No, sir, the mixed train would have to be divided on a basis—

Q. Did you find out how the Northern Pacific divided the items other than those referred to in 11, 12, 13 and 14?

A. No, sir.

Q. Paid no attention to that?

A. No, sir; I accepted their allocation, as I have stated, wherever it was made as an allocated item and it was so entered on their books.

Q. Now, on the same subject take 27, damage and loss of freight, 28, damage and loss of baggage, 29, damage to property, 30, stock killed or injured, 31, personal injuries; I understood you to say in your direct testimony these items were all allocated by the Northern Pacific and you accepted their allocations?

A. Yes, sir.

Q. Well, now, were they all allocated?

A. I think so. They were so marked in their books and accepted.

Q. Well, take the stock-killed item; suppose a passenger

train killed some stock, that would go to passenger expense, would it?

A. I should judge so, yes, sir.

Q. Suppose a freight train killed some stock, it would go to freight?

A. I should judge it would.

Q. Well, did you find out whether that was their basis of allocation?

A. I did not. I believe that was their basis of allocation, but I could not say positively now whether I affirmed that or not. That would necessarily follow from the fact that the amounts which they have allocated to freight and passenger or which they have assigned to freight and passenger, if they did not allocate it as their books state, varies on each road, and as we know the train mileage is greater in freight than in passenger and frequently the stock killed, as, for instance, the stock killed, as you will note, assigns $2,874.69 to freight and $2,974.64 to passenger,—it is evident that the train mileage basis was not followwed in that division.

Q. Did you know that before you determined not to ascertain what method was followed?

A. No, sir, it was all marked "Allocated." I looked over all of these items as I went through to see whether that relation held. They have all been examined. But had the division apparently been on a train-mileage basis I would probably have asked them about it.

Q. Why?

A. For the reason that I would want to be sure that I had properly understood the account to be allocated, and, if it was not, to make the correction.

Q. As a railroad accountant you are aware that damage to property includes damage by surface-water, and especially damage by fire scattered by locomotives or negligently attended when set to clear the right-of-way and spreading to the private

property of others, are you not? You know that to be a fact, do you not?

A. Yes, sir.

Q. And you know that in every railroad account that you ever knew anything about, there were such claims, where neither a freight train nor a passenger train or engine could be indentified as the cause of the flood or the fire or the other damage, do you not?

A. Yes, sir.

Q. And you knew, did you not, that those items could not be allocated but must be divided?

A. Yes, sir.

Q. And you therefore knew, when you looked at these accounts, no matter whether they were marked allocated or whether they were not, that there were common items of expense there which were not and could not be allocated, didn't you?

A. Yes, sir.

Q. You knew that some basis of division was used for the common items, did you not?

A. Yes, sir.

Q. Did you find out what the basis was, and if not, why did you not find out before you marked the method "obsolete"?

A. I did not mark that method obsolete, sir.

Q. You didn't intend that?

A. No, sir. If you will follow me for a moment, on this very item which you have here, damages to property, you will readily see the reason why it wasn't necessary to go into the allocation of any items.

Q. I mean the division.

A. The division of common items,—there are certain matters where the division would, of necessity and from the nature of the statement of the case, be a very small proportion; and when you come to those proportions, for the sake of the few

dollars that an allocation would make (making nothing in the result) it is not necessary always to go into those details. For instance, on the Terminal division here, the damages to property, freight, amount to $1,497.81, to passenger, $166.03. It is evident, from the very nature of the division, that that must be to a large extent an allocation and not a division. On the Lake Superior division, the three districts, it amounts to $1,326.41 to freight, to passenger only $393.14. There is no mileage which would touch that. So it is evident that a large proportion, the large bulk of that, must be allocated. We now come to the St. Paul division, where $965.61 is assigned to freight, and $1,159.71 to passenger; showing conclusively that, as that bears no relation to the mileage, the large bulk of that must have been allocated. On the Minnesota division, $1,118.15 is allocated or assigned to freight and only $371.62 to passenger. That shows conclusively that, in making up that account, the bulk of it must have been allocated. There might be some common items in it, however.

Q. How about the personal injuries, have you covered that?

A. No, sir, I have allowed your damages to property.

Q. How about personal injuries?

A. The personal injuries are marked "Allocated."

Q. What are the figures?

A. $102,794.13 for freight, $67,766.86 for passenger.

Q. About 66 per cent to passenger there?

A. No, sir.

Q. Not of the total, but what would that be, about 40 per cent?

A. It would be about 40 per cent passenger; very close to it.

Q. Well, now, what would be the right basis for dividing an unidentified personal injury or an unidentified fire that destroyed a large amount of property, or a surface-water case where the culvert got stopped up and the water backed up

over a man's farm and destroyed his cranberry marsh, what would be a good basis to divide that on? What would be a good basis of division of such common items? I want to get your idea about that, to see whether it harmonizes with the Railroad Company's method of division or the general thought upon the subject.

A. In the case of the non-allocated items mentioned, I should treat them on the gross-earnings basis.

Q. You think that the amount of rates, the question whether or not this temporrary injunction be vacated or made permanent, would be in important relation to the subject of division, do you?

A. Yes, sir.

Q. That is, if you would cut down the passenger rate to one cent a mile, you wouldn't charge so much to the passenger business?

A. No, sir.

Q. But if you doubled the rate you would charge twice as much?

A. You would charge more, yes, sir.

Recess until 2 P. M.

AFTERNOON SESSION.

Q. I think I had asked you, or at any rate I intended to,—I remember that I did ask you, and you said that revenue was the proper basis to divide between freight and passenger unidentified items of loss and damage, whether resulting in the injury of persons or property.

A. Yes, sir.

Q. Does Prof. Myers divide those items that way?

A. I do not recall now whether he did or not.

Q. Does Peabody divide those common items that way?

A. Mr. Peabody's notation is "Common expenses are divided between passenger and freight by the audit office on the basis of respective train mileage."

Q. What is your authority for dividing that on revenue on Table 4? The Peabody basis of division shows the same as the Northern Pacific, does it not,—both Peabody's. Am I not right about that?

A. Yes, sir.

Q. And Prof. Meyers, too?

A. Yes, sir.

Q. The Northern Pacific divides on the basis of train mileage; Peabody divides on that basis; Myers divides upon that basis. Now, what precedent or authority have you for applying revenue as a divisor of these common items of damage?

A. You understand, of course, that the books of the Northern Pacific, as far as I examined them and as reported examined to me, was that these items were allocated. The personal injury item you are referring to now, I believe.

Q. Oh, all these damages to persons and property.

A. And that is the reason that those figures appear the same on each one of the divisions on Table No. 4.

Q. Well, you knew, as a matter of fact, that there would be unidentified items of damage, by flood and fire and to persons, did you not, and that there would have to be some method of division? When you considered that this morning you told me that you knew that there was some element that divided and that it was not all allocated; therefore when you applied the Peabody method you could not apply it without finding out what was common, could you? When you applied the Myers method you could not do it without finding out what was common; when you applied the Louisiana method, if you did apply it, it was yours—net in one case and gross in the other,—you would have to find out?

A. No, sir; as I have stated, in this method where it was marked "Allocated" by the Northern Pacific I had accepted their allocation and that matter was not touched upon in the division.

Q. What authority have you, what precedent anywhere is there, for dividing these common items on the basis of revenue, either net or gross?

A. To which common items do you refer?

Q. Loss and Damage.

A. I haven't divided them on revenue basis.

Q. I know you haven't, but you have said that they ought to be so divided. You neglected to divide at all and took the same mileage basis of the Northern Pacific, and you told us, just before adjourning, that the revenue was better than the train mileage for all what you call common expenses; what is your authority for that, what precedent is there for that anywhere in the world?

A. The authority for that would be in this nature: that where you come to a common item of that character where there is no basis which would enable you to give it a direct allocation, the natural basis for the division of such a common item would be the use or the amount which the item in question derived from the use in which the expense was incurred and that therefore the basis for division would revert to the earnings. You could illustrate that by the principle of a receipt of a fee, say in my case, where it was joint between me and some other accounting firm and where we would naturally divide up our expenses on the basis of what we got out of the deal; the expense which I would incur personally would be mine, the expenses which Mr. Wilkinson, of the other audit firm, would incur, would be his. Those expenses which were joint would be properly divided between us on the basis of what we obtained from the fee. That illustrates the idea I have in making this gross-earning basis the basis of such common divisions as would occur here.

Q. It is conceivable to you, is it not, that in litigation of this kind the propriety of the relation of passenger revenue to freight revenue, taking into account the amount and kind of

service in each, might be under question?

A. Yes, sir.

Q. And that is, as a matter of fact, as you have treated this question, one of the results that you have shown, is the propriety of the relation of rates, freight and passenger?

A. Yes, sir.

Q. And in determining that, do you think you ought to take the revenue as a basis to decide that question?

A. Yes, sir, I think it is a fair basis.

Q. That is, given certain specified freight rates and passenger rates, the question being the propriety or justness of the relation between the two schedules of rates, to wit, one passenger and the other freight, you think to answer that question you ought to use the relation of the revenue to determine that?

A. Yes, sir.

Q. You think that is logical, do you?

A. I think it is a fair basis, yes, sir.

Q. Well, now, let us take that one step further (as the Master will have to do some time here in this case, probably), suppose that the problem is to determine the total value of the plant, fixed and rolling, in the state, and then attribute some of it to the freight business and some of it to the passenger business; the question in dispute is revenue depending on rates; do you think he should make the apportionment on the basis of revenue depending upon rates—the very thing to be valued?

A. No, sir.

Q. No, but in getting at the operating cost, you think he should?

A. For that—

Q. For these items?

A. Certainly.

Q. You think that is logical?

A. Yes, sir.

Q. More logical in that case, is it, than in the one I [illegible]

trated as to the value of property to be apportioned to each kind of business?

A. Yes, sir.

Q. Why?

A. For the reason that the apportionment of the property should not follow earning capacity, as it bears such a direct relation to that that an unjust rate would therefore practically or to a large extent perpetuate itself.

Q. I don't follow that, but I will not renew it. To illustrate, we will assume that a farmer, by reason of a defect in a highway crossing over which he is driving, sustains a loss of ten thousand dollars; this crossing is on a branch of the Northern Pacific road, having one freight train each way and one passenger train each way daily, making equal train mileage between the two; the problem is to divide the $10,000 for that injury between freight and passenger; do you not think that to divide it half and half on the basis of train mileage on that division would be a good way to do, and wouldn't that lead to a truthful, satisfactory and logical result, as logical as can be devised for that problem?

A. The injury, of course, occurring from the nature of the crossing and not by a train, I understand?

Q. No train movement involved in the accident.

A. I would think that the basis of the gross-earning would be a much more acceptable one than the train-mileage on that division.

Q. All right. Then we will assume that, on that division the freight earnings and passenger earnings were equal, but on the whole system in the state the freight earnings were four times as much as the passenger earnings; what should the division be—four to one, or even?

A. Four to one, for the reason that such accidents as you have spoken of on the division are attributable to the entire

matter under discussion, which is the state unit of railway operation.

Q. Suppose the accident happened on that part of the Great Northern road lying between Fermoy and Kelly Lake, over which I understand no passengers are carried and it is all freight, at any rate, assume it to be all freight, and that accident occurred by reason of the condition of the highway crossing on the branch, how should it be divided?

A. I see no reason to change the method of division, sir.

Q. The fact that it happened upon an exclusively freight road would not make it a freight item allocated directly, would it, but it should be divided depending upon the earnings between here and Lake Minnetonka on the Great Northern, should it, where they carry but little freight and mostly all passengers?

A. Certainly, if we are considering the state of Minnesota as a unit, it should be; if we are considering the branch itself as a unit it would come to the branch and it would be reflected by the branch earnings, and if no passenger earnings accrued on that branch, that would be an item of that character.

Q. Should a fence be divided the same way—repairing a fence? It is all weather-stress; trains don't run on it, stock run over it once in a while, but weather-stress makes it so they can break it down when they do.

A. Yes, sir, I treated this repairs of fences in the nature of a weather-stress expense and divided it upon the basis of the gross earnings.

Q. Yes. Well, now, the fence is to keep stock off the track, isn't it, and to protect the trains?

A. Yes, sir.

Q. Now, we will take a branch of the road fenced having equal train mileage, freight and passenger; why wouldn't it be fair to charge the value of that fence half to each on the basis of train mileage?

A. I can answer that by reading from the notes, as they

bear directly on that question, if you will allow me: "The next item is the repair of fences. There are two views on this item. One is that the fence is put up for the protection of train movement and therefore this expense should be divided on the train-mile basis exclusive of switching; the other view, and the one which I think is correct, is that the fencing is not worn by the train movement or dependent in any way upon train movement and the entire amount comes out of the earnings and the expenses of this repair, and should therefore be divided upon the gross-earning basis. Dividing on this basis we have", etc.

Q. The fencing is just as much for the safety of the train as the whistle on the locomotive, isn't it?

A. Yes, sir.

Q. It is to further the safety of train movement, isn't it, that is all it is for?

A. Yes, sir.

Q. Now, suppose that there is a branch of the road not fenced at all—which is the fact, isn't it, on the Northern Pacific?

A. Plenty of them, yes, sir.

Q. Should the earnings of a portion not fenced be the divisor of or an element in the division of the cost of fencing some other portion of the road?

A. I think it is the fair basis for that division, sir, of gross earnings.

Q. Now, take the Kelly Lake and Fermoy instance again; assume that that road be fenced for the protection of freight trains from collision with things on the track; are passenger earnings in any way related to that any more than the precession of the equinoxes?

A. They have slightly more bearing than the—

Q. Tell me just where the relationship comes in.

A. The relationship comes in in the fact that we have not treated this matter divisionally, as you understood.

Q. I know, but that is one of the points of my criticism.

A. I understand it so; and treating it as a unit we must necessarily treat the whole state and use our gross-earning basis as the division, even though the division of which you speak is fenced and has no passenger train movement.

Q. You think the passenger business should be charged with the cost of fencing a road over which no passenger trains go, do you?

A. Yes, sir, it is a portion of the up-keep of the road, due to weather-stress, considered, as I said, an operating unit.

Q. A snow-fence should be divided the same way, or differently? A snow-fence is to keep the snow off the track for the safety of the train; the other fence to keep cattle off the track for the safety of the train; the train doesn't ride over either of them, the water rots both of them. Should they be divided on the same basis or on different basis?

A. I have taken the use of the snow-fences and snow-sheds, as the object of the snow-fences and snow-sheds was to relieve the item of the removal of snow and ice, and I have divided the snow-sheds, on account of that shade of difference which occurs in my general use, on the basis of the train mileage.

Q. Your idea being that if the snow-fence wasn't there it would cost more to remove the snow from the track and that the track work should be divided on the basis of the train mileage?

A. That portion of the track work, yes, sir.

Q. Now, if the other fence wasn't there and a freight train killed a cow, that would all be charged to the freight business, wouldn't it?

A. Yes, sir.

Q. Or if a passenger train killed one it would all be charged to the passenger business, wouldn't it?

A. Yes, sir.

Q. And the clearing away of the wrecks strewed along,

would stand on exactly the same footing as the track work, wouldn't it?

A. Yes, sir.

Q. But still one ought to be divided on train mileage and the other on revenue?

A. As you will note in my discussion which I read you, (the short memorandum I read you concerning that) that there is the shade of difference in the use of those two utilities, which in my mind was sufficient to warrant the transfer to the train-mileage basis.

Q. Is there a snow-shed in Minnesota?

A. I do not know, sir. There are charges to snow-fencing in Minnesota.

Q. There isn't a snow-shed item in Minnesota, is there? There are some snow-fences.

A. That I do not know but—

Q. Suppose you were dividing between freight and passenger costs on the Illinois Central road, running from Albert Lea to New Orleans; through Iowa they have some snow-fences; when you get to Missouri, and from there to the Gulf of Mexico they haven't any; should that be divided upon some unit existing or created in the territory fenced, or should the road be treated as a unit?

A. In that case I think that I should excerpt from the consideration those divisions upon which there were no snow-sheds.

Q. Why? Because Louisiana ought not to be charged with that item,—isn't that true?

A. There would be no such repairs in Louisiana for maintenance.

Q. You couldn't use revenue there unless you built up a hypothetical revenue breaking it on different sections of the main line, could you?

A. You would have to break it if you used revenue on that basis, yes, sir.

Q. So you would use train mileage on the division on which the snow-fences were, wouldn't you, or part of the road?

A. Part of the road, yes, sir.

Q. The same would be true if the laws of Louisiana do not require any fencing at all and the road is not fenced against cattle, you would divide the cost of the fence against the mileage on the portion fenced, wouldn't you, train mileage by divisions, for the same reason, that Louisiana ought not to pay for any fences if it hasn't any; you couldn't divide on revenue in any such case could you?

A. That would be a case which probably would not occur, but should that state of affairs occur where there would be no fences in any state and our handling that state, I should, of course, not have any expenses and would disregard it. If I were handling the road as a unit from end to end, I would probably take that in and put that weather-stress of my fencing on the basis of the gross earnings.

Q. Well, the effect of that is to charge to each part of the road a like amount without regard to whether it has any of the service involved in the expense or not, isn't it?

A. No, sir, because you are treating in one case the road as an entity from end to end; in the other case you are treating it as a state item. I understand the point you mean.

Q. Now, let us assume that all of the snow-fencing and snow-sheds on the Northern Pacific road were on one division in the Red river valley; you would divide that on the basis of the train mileage in that branch, for the same reason that you wouldn't charge anything to Louisiana because the main line and the terminal division had no snow-fences at all and you would use the train mileage on the division, wouldn't you, if you stopped to think about it to see what was right and reasonable?

A. It is very probable that I would do so, Mr. Butler.

Q. But you didn't?

A. I did not, no, sir.

Q. You didn't either locate the snow-fences or the mileage?

A. No, sir.

Q. Now, if it was a cattle-fence in the same place, half of the road fenced and half of it not, wouldn't it be right to divide that just the same as you would the snow-fence, on the train mileage, on the divisions fenced and that a heavy preponderation of either the freight or passenger mileage on some other part of the road wouldn't have anything to do with it?

A. I have not divided the repairs of the fences on that basis.

Q. I know you haven't, but wouldn't that be the right basis to do it on, half of the Northern Pacific being fenced and half of it not, to divide it on the train mileage, mileage on half of the fence between train and passenger, and it wouldn't make any difference how the volume of business fluctuated by reason of the service rendered on the other half; ought not you to do it?

A. I hardly think so, for the reason that in the basis which you speak of you interjected in the Louisiana case a case where they were not compelled to do this. The conditions upon which they would operate within a given state or within state lines would naturally be uniform as regards to law, and if they did not fence, as you suggest, they would probably have more expense on the division unfenced and therefore, in consideration of that point, it would be very reasonable to still stand to your gross-earning basis.

Q. Then it would depend on whether or not you would select one manner or the other for the division between freight and passenger of the fences alongside of a railroad,—would depend upon the statute law of the state, as I understand you?

A. Oh, no, sir, not necessarily.

Q. What did you mean then by bringing in the statute law of the state?

A. To illustrate only the point that the conditions in one state were supposed to be uniform; now, the reason that you have said—

Q. You know that the condition on the Northern Pacific railway in the state of Minnesota, as respects fencing of the right-of-way or track, isn't uniform; you know that, don't you, as a matter of fact?

A. Yes, sir, but you asked me a moment ago concerning that matter bearing on the statute. I quoted that in my reply to you merely to illustrate the point that within the state there might be such conditions in the law as you suggested in your question which would necessitate the consideration of that matter; but for the state, where it is under the uniform law and under to a certain extent uniform operating conditions, I see no reason for deviating from the lines that I have laid down. Now, I will say this: that in all cases of division of expenses you can follow the division of an expense from point to point until they shade imperceptibly into one another and there is the point where you draw the line. We know that from the fact of certain expenses which we would have in all of these which are coming down here, that approximate somewhat into one another; and I have deemed that there was sufficient difference between 67 and 68 to draw the line between the gross-earning and the revenue-train mileage on those two items. You can quote a number of points of similarity, as you have done.

Q. Items 10 to 27 you characterize as train-movement items?

A. Yes, sir.

Q. Please define what you mean by train-movement cost, fully.

A. I mean by those the expenses which are incurred in the direct movement of the freight when it has been consigned to a train and gets out on to the road in train service.

Q. And passenger?

A. And passenger, of course.

Q. That is, it means this: that it is cost to move the trains which haul the freight or move the cars in trains which haul the freight, to move the passengers in the passenger cars which haul

them, is that right?

A. Yes, sir.

Q. Over the road?

A. Yes, sir.

Q. It does not include switching, then?

A. No, sir; it happens to in these items that you have pointed out in the case of the fuel for locomotives, which is in here, and the use of those utilities where they are not separated from the you might call direct train movement.

Q. Which side in your division falls to supplies and men operating switch-engines? Or, if divided, on what basis have you divided them between freight and passengers? Switch-engines, under your definition just given, of the men running them, or the fuel steaming them is not included in train-movement costs?

A. They are included in items 10 to 27 as I have used them.

Q. I know that, and your definition of train-movement costs excluded, not only by the terms of the definition itself but by express exception the switching. Now, switching is done with men and locomotives and fuel, and in these 10 to 27 items you have it in all of them, and I want to know whether you charge it all to the freight or all to passenger, or, if you divided it, how you divided it.

A. I have divided it according to the allocation of the Northern Pacific Railway Company.

Q. On what basis was that? You told us yesterday, did you not, that the switching crews were common and that you should charge 5 per cent to passenger and 95 per cent to freight? Now, we find the engines and supplies for engines and the fuel and the men running them all included in these train-movement expenses,—improperly included because they are not a part of the train movement under your definition; now, is there a solitary item of that expense that is attributed to the passenger business, a solitary cent for fuel of switch engines, for engineers

for switch engines, for firemen for switch engines, in your division or in the one that you have adopted attributed to the passenger business?

A. Only as the Northern Pacific may have allocated it, sir.

Q. Well, you cannot allocate, as we have used that term, a common item?

A. I used that term because on the Northern Pacific records it was reported as an allocated item. I should say only as the Northern Pacific have allocated and divided it.

Q. How did they divide the common item?

A. I do not know, sir.

Q. How would be the right way to divide the common items, —revenue or mileage, or neither?

A. We would divide those, if we had them, on the basis that we have adopted in the division of our switchmen, above there.

Q. You say that the logical thing to do, having segregated the switch-engine costs, would be to divide the fuel, cost of engineer, cost of fireman, on the same basis that you divide the cost of foreman and his helpers, which would be 76.56 to freight and 23.44 to passenger; am I right?

A. No sir, I should divide that upon the way that I have treated the whole of the division of item No. 5.

Q. What percentage would that give? You mean the whole of the common items, or would you toss in the allocated items, too, in that factor?

A. I would put in the allocated items as far as the Northern Pacific have allocated; they have allocated some of those switching items directly. It is only the non-allocated that we have taken and placed on this basis of the division which you are quoting.

Q. Well, I would like to get the percentage. You won't use 76.56 and 23.44 what will you use?

A. I would have to make that computation on the basis upon

which No. 5 is divided and which would take a few minutes to do.

Q. I will wait; I want that percentage.

A. That would give about 8.09 per cent to passenger.

Q. That is, the division of the engineer's and fireman's pay on the common switching crews would give 8.09 per cent to passenger?

A. Yes, sir.

Q. And that also includes fuel and engine supplies on such common crews?

A. It is supposed that would naturally follow the same basis.

Q. But this morning you divided the wages of the foreman and his helpers so as to give the passenger business 23.44 per cent, nearly three times as much as results from your present division of the engineer and fireman?

A. That being on the unassigned proportion.

Q. That is the one I mean.

A. On the unassigned proportion. With my 8.09 which I mention today I have taken, in order to obtain that, that the same proportion of the switching expenses represented in engineers, fuel, etc., will be allocated by the Northern Pacific as were allocated originally by them in the switching and watchmen account, and on that basis I have derived the 8.09.

Q. Wait a minute now. Going back to item No. 5, there are $134,171.80 of common items in that account of switchmen and watchmen, are there not?

A. Yes, sir.

Q. $62,939.80 represents the wages of men watching crossings and yards, which includes watchmen at docks and freight houses, and you divide that on one basis, do you not?

A. Yes, sir.

Q. That is the engine-mile basis including the mileage of switch-engines, is that right?

A. Yes, sir.

Q. Attributing 5 per cent of all the mileage of all the switch-engines to passenger and 95 per cent to freight?

A. Yes, sir.

Q. The balance of the common item is $71,299.50 which represents the wages of the switchmen in the switching crews, does it not?

A. Yes, sir.

Q. You divided that on the car movement basis, you finally told us, giving to the passenger business 23.44 per cent of that expense; that is the expense of all the switching crews on the road, isn't it?

A. No, sir.

Q. What part of them?

A. The unallocated portion of the switching crews.

Q. I mean the switchmen in the crews.

A. They are the unallocated portion of the switching men.

Q. Those that are not exclusively in a passenger yard or exclusively in a freight yard?

A. Yes, sir; I suppose that is the allocation.

Q. Well, the direct allocations, did you find out what they would be, whether it would amount to much or not, for switchmen?

A. Yes, sir, the direct allocations of the Northern Pacific amount to $310,000 out of $444,000.

Q. For switchmen?

A. For switchmen and watchmen.

Q. No, that is for watchmen.

A. Oh, no, sir, the watchmen don't amount to that, I beg your pardon. That is for switchmen and watchmen. That is on that joint account.

Q. Switchmen and watchmen?

A. Yes, sir.

Q. Now, I want to get your basis of division percentage to

freight and passenger of the same item, of the same men, of the same crews, of the different men that you divided the $71,000 plus on; you decline to divide on the same basis—

A. As I have stated, or intended to state, we would naturally suppose that when these items were brought up from our engineers and firemen, our fuel from locomotives, and so on, that the Northern Pacific would be able to allocate as much of those as they have allocated in the account under discussion, and if, therefore, we take the allocated items of the Northern Pacific road in the items under discussion, and to those add the division of our switchmen, which is $71,299.50, which has not been allocated but is common, we would then obtain, with the sum of the allocations by the Northern Pacific and the division of the non-allocated part, $71,299.50, and the relation when added together, the allocations and division, would show a percentage of 8.09 to passenger. We can't bring all the items for fuel, for locomotives and for engineers' service and for supplies of the locomotives up to that point without recognizing the fact that there must be some allocations. Were it impossible to allocate any of those items, then on that basis we might claim that we would divide all of those by a factor, which would give 23.44 per cent to passenger, but we must consider that the Northern Pacific would be as successful in the allocation of those lower items further down on the list as they were in the allocation of the item No. 5, and therefore I say that, as far as my information goes on the subject, and as my notes read here (which presumably are from the Northern Pacific accounts) they would show 8.09 per cent attributable to the passenger traffic.

Q. Well, why should there be more attributable to passenger traffic of the wages of the switchman than of the engineer and fireman in the same crew?

A. There are not and as I have stated it, it is just that point that I am equalizing, sir.

Q. Well, have you equalized it? That is what I am trying to get at. Can you show me that you have divided in this the result will be the same; that you have divided the salary of the fireman and engineer on precisely the same basis as you have the other members of the same crews?

A. You mean in this computation which I have just made for you?

Q. Yes, or anywhere, and I don't care where.

A. Well, in this computation which I have just made for you, yes sir. You will note—I will have to report this again, Mr. Butler; I am afraid I haven't made myself clear—

Q. Let me ask you this question: the division of your items from 10 to 27 you have taken from the Northern Pacific?

A. Yes, sir.

Q. And it divided all common items of switching on the train-mileage basis, didn't it?

A. I suppose so; I do not know.

Q. Now, don't you think it would be an extraordinary coincidence if the train-mileage basis which divided the wages of engineer and fireman would come out the same on the basis of car movement, $182,000 plus to the $[redacted] plus that you divided the $71,000 item for the other members of those crews on? don't you think that would be an extraordinary coincidence?

A. Yes, sir, it would.

Q. It is not true, is it?

A. No sir; but you are mistaking, Mr. Butler, the fact that you seize upon a small non-allocated item and attempt in that to ignore the allocated items which are part of this expense. Now, you ask me supposing that you excerpt from here these expenses of switching represented by the engineer and fireman and fireman and bring them up and divide them on the basis—I say I would divide them on that basis; the supposition would be, as I said, that the Northern Pacific would be just as successful in allocating a certain portion of these items to passenger

and freight directly taking those into consideration and then taking into consideration the same percentage of non-allocated, divided on the basis of the car movements, that would obtain a percentage of 8.09.

Q. Why didn't you use the allocations, then, to divide the salaries of the switching crews in the $71,000 item, and then you would be sure to be on the same basis without assuming that the Northern Pacific's method of allocation was as good in one instance as it was in the other and when you didn't know what it was in either?

A. Well, there are certain items which from their exact nature and the location of the yard and so on, can be allocated and I presume are allocated, and I have taken the fact that they are allocated by the Northern Pacific and accepted it. Then there are certain items here which are not allocated which you may say are general switching and not localized switching, and on that basis I have used the car-movement basis for their division; and, therefore, when you ask me to bring up the engineer's and the fuel account and the locomotive material, the use of locomotive supplies, up into that account and divide on the basis of switching, I state that we must suppose that a large portion of them can be allocated and it will only be the non-allocated proportion corresponding to the $71,000 non-allocated which will be non-allocated in this case; if, therefore, we take the allocated expense and add to it the divided expense we get the percentage of 8.09, which would be the applied expense above.

Q. What is the total of the train-movement items?

A. Freight, $2,024,344.34, a total of $2,714,256.41, leaving the passenger $689,912.07.

Q. Before you decided to accept the allocations and divisions of the Northern Pacific as to the aggregate of this large sum, did you ascertain how much was common, or the basis of division used by the Northern Pacific Company?

A. No, sir; I accepted their allocations without question.

Q. Have you since learned what the basis of division was?

A. I have not, sir.

Q. Have you made any attempt, approximately or correctly, to find out how much was common and how much not?

A. No, sir.

Q. And is the train-mileage basis a good basis for dividing these common expenses contained in these gross figures?

A. No, sir.

Q. What is the good basis for that,—revenue?

A. It would depend upon the item itself, sir.

Q. Train-mileage would not be, for any of the items?

A. It might be used in some of them, yes, sir.

Q. For example?

A. I couldn't say off-hand without going over them.

Q. What method should be used, in your opinion? What method did Peabody use, Peabody No. 1, Peabody No. 2, Prof. Myers and Hillman No. 1 and Hillman No. 2,—what method would they use? Those were methods you had to do with.

A. None of those methods, sir, are used in this at all. They are allocated items.

Q. Well, you have just told me there were some common items in them.

A. Yes, sir, but I have treated them as allocated items in my divisions.

Q. Divided, allocated and correctly divided, have you not?

A. Yes, sir; I have accepted the divisions made by the Northern Pacific, whether allocated or not.

Q. Knowing some of it was allocated and some of it common, didn't you? You knew that, didn't you?

A. Yes, sir, as a natural inference from their basis.

Q. From the items themselves. You say the train-mileage basis is wrong; the Northern Pacific, I am advised, divided the common items in these accounts on the train-mileage basis;

now, I want to know what Peabody method No. 1 and Peabody No. 2, and Hillman No. 1 and Hillman No. 2 and Prof. Myers would do with these.

A. Peabody would mark his "Locate direct on basis of actual miles run on main line and branch, respectively, as far as road enginemen go."

Q. The common items we are after are the switching items. Maybe this will help you: The bulletin or order or circular that you have in your hand, by Peabody, was gotten up since the new classification by the Interstate Commerce Commission?

A. That is my understanding of it.

Q. And the new classification by the Interstate Commerce Commission segregates these common items between yard and road, does it not?

A. Yes, sir.

Q. So that a circular or order applying to the present classification would not fit according to the classification which was used in the year 1907?

A. Regarding yard enginemen? Is that the point you refer to, sir, to yard enginemen?

Q. I meant the common items in these 10 to 27. I want to know how you would divide them yourself, and how Peabody would, and Prof. Myers. You say the train-mileage basis, which I am advised the Northern Pacific used, is wrong; what is the right basis, according to you in your two methods, No. 1 and No. 2, if they differ?

A. On the common items of engineer and fireman, account 21, we would use the car-movement item as indicated, showing 23.44 to passenger; in default of the other information on the subject, on 22, in joint dispatchers, wipers and roundhouse laborers, we would take the non-allocated portion on that basis.

Q. On what basis?

A. On the basis of 23.44, the car-movement basis; 23.44 to passenger. On the fuel for locomotives, where it was non-al-

located we would use the same basis, and for the oil, tallow and waste.

Q. That is 23.44 to passenger?

A. Yes, sir; practically all those items of the non-allocated portions would come on that car-movement basis.

Q. So then, of all the common items in these train-movement items you would divide on the basis of 23.44 to passenger and 76.56 to freight?

A. Yes, sir. You understand thoroughly what I mean by common items?

Q. Why, yes.

A. That a large portion of them, when they are brought up there, would be allocated and not that the entire account which you excerpted as a switching item would be considered a common item.

Q. Oh, I know it is only the common items.

A. All right, I understand it.

Q. If there were a switching crew working in the freight switching yard, we wouldn't charge any of that to passenger?

A. Yes, sir.

Q. So I was right, that all the common items should be divided on the same basis as you divided the $71,000-plus, 23.44 to passenger and 76.56 to freight?

A. Yes, sir. Probably our discussion arose from this, Mr. Butler, that I understand your question to imply or to mean that you thought that the entire amount which was attributable to switching in these items down here of fuel, etc., to be—

Q. I didn't intend to so imply, perhaps I did, but I didn't mean to; I was talking about common items.

A. That was what I was guarding against in my answer.

Q. Now, so as to make it clear, you say that all the common items of expense from 10 to 27 should be divided, freight and passenger, 23.44 to passenger and 76.56 to freight?

A. Yes, sir.

Q. Now, will you undertake to tell me what difference that will make in the division in this table? I don't mean now, but later on?

A. Yes, sir.

Q. Now, let us look at the item of superintendence. This is an item where you differ from the Northern Pacific in division between freight and passenger, this item 35, is it not?

A. Yes, sir.

Q. It is all common, is it not?

A. Yes, sir.

Q. How did the Northern Pacific divide it?

A. On a train-mileage basis.

Q. Revenue-train mileage basis?

A. Yes, sir.

Q. How did you divide it?

A. On the basis of all the accounts preceding it.

Q. Train-mileage is not the right way to divide that item or any part of it?

A. No, sir, I consider the superintendence as the supervision of the accounts which have preceded it and have divided it on that basis.

Q. Well, hasn't he duties to perform outside of the matter of the accounts of the preceding items? Do the 34 preceding items cover all of the activities of the superintendent or superintendents? That was your theory on your direct examination?

A. Yes, sir.

Q. That the things that the superintendent did were all accounted for in the 34 preceding items, and therefore you divided superintendence on the basis of the division of these 34 items as a total, as I caught you?

A. Yes, sir.

Q. Now, as a mattter of fact, the superintendent has important duties to perform beyond that, has he not?

A. Yes, sir, he would have the duties of the supervision of

the maintenance of road and structures,—to a certain extent would come under his care.

Q. And of equipment?

A. No, sir, very little.

Q. Why, on the reclassification of this account by the Interstate Commerce Commission it is divided, is it not, between conducting transportation and maintenance of equipment?

A. We have an item here, supervision of equipment.

Q. Maintenance of way?

A. We have an item here, supervision of equipment, under their classification of expenses.

Q. Why didn't you take in, as a basis of division, then, the division of the items of maintenance of way?

A. That should have been done.

Q. It was a mistake, was it not?

A. That is an error, yes, sir.

Q. Mr. Peabody divides on the basis of train-mileage and agrees with the Northern Pacific, does he not?

A. Practically, yes sir.

Q. Well, absolutely, doesn't he, according to this paper you have handed us?

A. I say practically, because, as you know, in making up this on this Peabody's basis, I have treated Minnesota as a whole, (the train mileage,) while the Northern Pacific had made that division, you might say, upon divisional train-mileage, so that that makes a slight difference.

Q. Yes, but the unit is the same?

A. Yes, sir.

Q. The application of the unit as a divisional application or as a total, is the only difference between Mr. Peabody's method as you applied it on Table No. 4 and the Northern Pacific's?

A. Yes, sir.

Q. What railroad accountant that you know of divides that item as you do?

A. None.

Q. Or on any other basis than that by Mr. Peabody and the Northern Pacific?

A. I do not recall any now that do so. I was trying to recall.

Q. What accountant does? What authority outside of yourself is there for it, if any, that you know of?

A. There is no authority for it.

Q. What precedent is there for it, if any, that you know of?

A. There is no precedent for it. There is, however, the absolute fact that the superintendent's time, being taken up in the supervision of those items, is chargeable as those items have been divided, supposing, of course,—

Q. That is, all the maintenance-of-way items and all the conducting-transportation items?

A. Yes, sir; supposing, of course, that they have been properly divided. That is a matter which I hardly think requires a precedent to establish it.

Q. Well, do you hold that everybody else has been wrong about that? You say the train-mileage is wrong, and you say that nobody that you ever heard of agrees with you about it; do you hold that everybody but you is wrong? Now, a good many men view it that all the superintendent's activities are directly or indirectly for the purpose of getting freight moved miles over the track and therefore divide that item on the train-mileage basis?

A. Yes.

Q. Now, you say that is a wrong basis?

A. Yes, sir.

Q. Is it the only basis of division except yours that you have ever heard of?

A. I don't recall any now.

Q. You can't think that you ever heard of any other?

A. I don't recall any at present. Oh, yes, sir,—I will take

that back; I do; the M. & St. L. divided that, as I have stated before, between freight and passenger.

Q. Well, that is a combination of mileage?

A. Of car-mileage and engine-mileage, yes, sir.

Q. That is the unit they always used, isn't it?

A. That is the unit they always used.

Q. But it is based upon the conception of mileage of freight and passenger equipment?

A. Yes, sir.

Q. And you say that conception is founded in error?

A. Yes, sir.

Q. You were in the superintendent's office on the Cumberland?

A. Yes, sir, superintendent's clerk.

Q. You were clerk to the superintendent. Did you not find that his activities were for the most part either directly or mediately aimed at getting passenger trains and freight trains to make mileage?

A. That was under his supervision; at the same time, he kept track of the activities of the clerks and agents along his line, which was practically a division of the Pennsylvania road. He kept track of the work of the company very generally in every way; the train mileage and the movement of trains and the car mileage, and the movement of cars undoubtedly enters very largely into his activities.

Q. And would anything else?

A. But it by no means concludes his other activities.

Q. But it does more than anything else, doesn't it?

A. Only as the expenses of that which naturally reflect the use of that utility would enter into it. I don't consider to any greater degree, only as that expense may be larger than the others.

Q. If you had used the basis that you intended to use, the division of all of the conducting-transportation items and the

maintenance-of-way-and-structures items, you would have given still less to the passenger business of this cost than you have, would you not, because it is in the maintenance of way and structures that you make the big cut?

A. It would assign approximately $800 less to passenger account.

Q. On the right basis than it received on the basis you used?

A. On this basis which I have used. The percentage in one case being about 20½ and the other 21½.

Q. But, of course, the verity of all that depends upon the correctness of the division of the items preceding and the items following which are included under the maintenance of way and structures?

A. Yes, sir.

Q. So, in so far as errors have been or may be discovered, either as to methods or amounts in these preceding items, just so far is this division impaired?

A. Yes, sir.

Q. Am I right about that?

A. Yes, sir.

Q. Take the items 38 and 39. 38 is other expenses; 39, stationery and printing.

A. The "other expenses" are allocated by the Northern Pacific and have been accepted.

Q. Well, they are allocated and divided, you mean. There are some common items of expense, are there not?

A. Just a moment. I will see.

Q. You can see from the nature of the items, can you not?

A. They are all marked "Allocated" on the Northern Pacific Railway Company's books.

Q. Are they marked "allocated" where they have allocated some and divided the others, just as they did in a number of other accounts that we have been through?

A. I didn't so understand, no, sir.

Q. Well, they marked the loss and damage to persons and property "allocated," you say?

A. Yes, sir.

Q. You told me that you did understand that there were some common items there?

A. The personal injuries, yes, sir.

Q. And you quote their books as saying 10 to 27 were allocated, and of course you do know there were common items there, in the train movement items, don't you?

A. Yes, sir, there were some divided items.

Q. Now, under the "other expenses," 38, "stationery and printing—A," 39, in railroad accounts are there not usually some items common to freight and passenger there?

A. There might be.

Q. Always is, is there not?

A. There might be in stationery and printing. There would presumably be some few items in stationery and printing.

Q. How as to "other expenses"?

A. Could be probably allocated without any difficulty; at least I should judge they could.

Q. Well, to take the stationery for superintendent's office, would that be a common item?

A. Yes, sir.

Q. And the stationery and printing—A includes stationery for the superintendent's office, does it not?

A. Yes, sir.

Q. And therefore you were not misled at all when you saw a statement in the books, if there is such a one (whatever its form may be, I mean) that this item was allocated—you knew that there were some common items there of necessity, did you not?

A. Yes sir, some common items.

Q. Did you find out how they were divided?

A. No, sir.

Q. How ought they to be divided, in your opinion, under 39?

A. Common items under 39 should be divided on the same basis as the preceding accounts in the—

Q. The same as you divided superintendence. How should it be divided as between states, and how was it?

A. I don't know how they divided between states.

Q. How should it be divided between states?

A. The stationery and printing could readily be divided, at least almost in its entirety, by allocation between the states. It would be only where the superintendent's division ran over into the neighboring state that there would be any necessity for a division there.

Q. Well, there are six or eight overlapping divisions here, are there not?

A. No, sir.

Q. 5 is the number?

A. 3.

Q. How should they be divided as between states—the common items?

A. A very fair way to divide those would be upon the freight-car mileage and the passenger-car mileage as between common items which were allocated to freight and passenger, and the others would be very fairly allocated on the total-car mileage.

Q. That would cover the superintendence, printing and the like?

A. Yes.

Q. Should be divided between states on the car-mileage basis?

A. Well, that could be gone into in considerable detail, Mr. Butler.

Q. I know, but—

A. But, as a general proposition, I should state that that would be fair enough.

Q. Would that be the fair way to divide the superintendent's salary, too?

A. You would have to make up for him a statement of his combined expenses if we ran it into detail.

Q. The Northern Pacific did, didn't they, they located it to divisions, and the overlapping divisions showed, didn't they?

A. The overlapping, yes, sir.

Q. How did they do it, what basis did they use?

A. I suppose they used either the train-mile or track-mile basis, I don't know; probably the train-mile basis.

Q. Is that the right basis?

A. No, sir, it could contain a small percentage of error.

Q. Well, what percentage of error?

A. I couldn't say without figuring it.

Q. Give it within limits, minimum and maximum.

A. It might be from 10 to 20 per cent of the amount charged over into the state itself, of the total superintendent's salary.

Q. Charge too much to the stae, would he?

A. To the overlapping division. I meant that the proportion charged out of the state might be 10 to 20 per cent.

Q. 10 to 20 per cent too high?

A. Yes, sir.

Q. Charged out of it, is that it?

A. Charged out of Minnesota.

Q. On the mileage basis or the train-mileage basis?

A. Yes, sir, might be from 10 to 20 per cent. Not of the total salary, but of the amount charged out, which roughly would be probably 5 to 7½ per cent of the total salary, probably 5 per cent. This is roughly from recollection.

Q. Recollection of what?

A. Of the tables here which show that item.

Q. You didn't find out how the Northern Pacific did it, did you?

A. I did at the time, but accepted their allocation.

Q. Now, why would not train-mileage do as well to divide the stationery and printing item on as car-mileage? The Northern Pacific used the train-mileage, did they not? I am advised they did, and if you don't know that, I will tell you that is our understanding of it. Now, why isn't that as good as the car-mileage that you suggest to divide between states?

A. Because the car-mileage gets down a little closer to the facts in the case than the—

Q. What car-mileage account was there—Total in the state or on the divisions?

A. On the divisions.

Q. You would not use the total in the state?

A. No, sir.

Q. Now, as I understand it, neither of these items 38 or 39 —Did you say there were some common expenses in 38?

A. I do not know; I should judge there would not be.

Q. Well, as to 39 you accepted the division to the state by the Northern Pacific?

A. Yes, sir.

Q. Without checking it or knowing what the basis of division was?

A. Yes, sir, I accepted their divisions to the state.

Q. You didn't know what it was?

A. I knew at the time and let it go. I don't remember exactly what it was, though; probably train-miles.

Q. Found it was a wrong basis, didn't you, and then you found their division between freight and passenger; did you find what the basis of that was?

A. I have that stated here, "Stationery and printing apparently allocated and have accepted it as such, as it did not show the percentage which would accrue under a train-mileage basis as I had figured it", and I therefore accepted it as an allocation to freight or passenger.

Q. You couldn't go by the percentage if part was allocated

and part was divided, could you?

A. No, sir.

Q. Now, do I understand that you didn't find out how they divided the common items of stationery and printing between freight and passenger?

A. No, sir.

Q. You accepted it without finding out?

A. Yes, sir.

Q. And you say the train-mileage basis is wrong?

A. Yes, sir.

Q. Do you know whether your basis would increase or decrease the amount attributable to the passenger business?

A. It would probably decrease the amount; I couldn't say.

Q. Will you make a computation for me?

A. It would be impossible, sir, as I do not know the amount of this stationery and printing that was allocated, and without that I couldn't do it..

Q. All you would have to do would be to look at the vouchers and find out?

A. I could re-examine the accounts, sir.

Q. You had to do that in all accounts where there was a portion allocated and a portion divided, didn't you?

A. I don't know as I care to undertake that work.

Q. If it was burdensome I wouldn't ask you to do it.

A. It would be somewhat burdensome, but I will do so if the suggestion is pressed.

Q. I thought you could do it readily because I thought you had the data for the division.

Mr. BUTLER: I think that is all, your Honor, on this subdivision of accounts prior to maintenance of equipment.

Adjourned until Wednesday, June 30th, at 10 A. M.

FEDERAL BUILDING, St. Paul, Minn., Wednesday, June 30, 1909, the hearing was resumed at 10 o'clock A. M.

CONWAY W. HILLMAN,

recalled for further cross-examination, testified:

By Mr. BUTLER:

Q. You were to give us certain percentages this morning.

A. Yes, sir.

Q. Revenue train miles.

A. 54.8 freight, 45.2 passenger.

Q. Go on.

A. Gross earnings, freight, 75.419; passenger, 24.581; engine miles, including switching, 73.5 freight, 26.5 passenger; car movement—which is number of cars to handle traffic—76.56 freight, 23.44 passenger.

Q. You haven't expressed that correctly, have you—"number of cars to handle traffic"?

A. Yes, I would consider it an accurate definition. I can make an explanation of it, perhaps, a little more definite than that.

Q. Go on.

A. The train weight percentage is 81.648 freight, and 18.352 passenger.

The MASTER: Is that net or gross?

WITNESS: That is gross train weight.

Q. Gross train weight including engine or excluding engine?

A. Including engine. The car mileage percentages are 87.89 freight and 12.11 passenger.

Q. The revenue train mileage is the number of miles traveled by trains which earn money from the public, carrying pay-freight, as I understand it?

A. Yes, sir.

Q. A train hauling empty cars over the line to points for

loading would not be included?

A. I should judge it would be, yes, sir.

Q. Well, is it a revenue train?

A. If I were keeping those statistics, I should class it as a revenue train, sir.

Q. How did the Northern Pacific do that?

A. I suppose it was done in that way, sir.

Q. Is that the uniform way in railroad accounting?

A. I judge it would be; I have never asked whether that was or was not done, but it seems to me so evident that I would certainly consider it that way without a question.

Q. And a passenger train deadheading, for example, running empty in one direction to run special back, would that be a revenue train?

A. Yes, sir, I would class it in the revenue train mileage.

Q. What trains are not revenue trains?

A. Work trains, specials carrying officials. There are sometimes trains classed in the special column such as circus trains; or trains which are chartered might be carried in the special train column. They would be, of course, a very small amount.

Q. Would they be revenue trains or not?

A. Yes, sir, they would be considered revenue trains.

Q. Now, have you defined fully and sufficiently what this revenue train mileage is that you have used as a factor here?

A. Yes, sir.

Q. Do the freight gross earnings include the miscellaneous freight receipts that have been referred to here, or do they include nothing except pay for transporting freight?

A. It includes the miscellaneous freight receipts, sir.

Q. In the aggregate a large sum of money, is it not?

A. A considerable portion, yes, sir.

Q. And the gross earnings taken into account to give us the passenger percentage here includes the earnings called

miscellaneous earnings?

A. Yes, sir.

Q. From mail, express, excess baggage, storage, sleeping cars, and all that large class of receipts?

A. Yes, sir.

Q. And the proportion of miscellaneous passenger earnings to the total gross passenger earnings is higher or lower than miscellaneous freight earnings to the total gross freight earnings?

A. The proportion is higher in passenger.

Q. Very much higher, is it not?

A. Considerably higher, yes, sir,—very much higher.

Q. Can you, at a glance, approximate the percentage of total passenger earnings that is derived from miscellaneous and in like manner on the freight earnings? I don't care for the exact percentage, but I would like the approximation.

A. Approximately $240,000 freight.

Q. Miscellaneous receipts?

A. Yes, sir, approximately $245,000.

Q. Out of what total freight?

A. Out of a total of $10,800,000; and the passenger earnings approximately $600,000 out of $3,463,000.

Q. The miscellaneous freight receipts, then, are about 2 per cent of the total?

A. A little in excess of two per cent, yes, sir.

Q. And the miscellaneous passenger receipts, about what per cent of the toal passenger earnings?

A. In the neighborhood of 17 per cent.

Q. The engine mileage, including switching, 73½ per cent freight and 26½ per cent passenger, that includes all the switching in the state, does it?

A. Yes, sir.

Q. Did you include the engine mileage on the terminal division in getting these figures, road or switching?

A. Not as a terminal division, but I judged, as the distinction of the terminal is not carried on to the Northern Pacific books from which this record is taken (Table No. 3) that those mileages were taken into account in the Lake Superior division and the St. Paul division where they touched the terminals.

Q. I am glad to have your explanation, but I wasn't intending to ask for the method of getting the figures because I don't care to trouble about that. I want to find out whether they are in.

A. Yes, to the best of my knowledge and belief, they are included in what I have given.

Q. That is a very important fact to know, is it not?

A. Yes, sir.

Q. Don't you know whether or not these percentages of the engine mileage including switch engine mileage include all the engine mileage in the state, or whether they only include a part of it? that is what I want to get at.

A. I think it includes it all.

Q. Does it include worktrain mileage?

A. No, sir.

The MASTER: Is it revenue engine mileage you speak of?

WITNESS: It is revenue and all classes of mileage. As shown on Table No. 3, the headings are for the passenger and freight under Train Mileage, Helper and Pusher Doubling Hills, Running Light, Helpers, and Snow and Ice—which snow and ice I omitted as well as the worktrain mileage. I did not add the column Switching.

The MASTER: Running light is running without a train?

WITNESS: Yes, sir.

Q. In your first answer to us you did say engine mileage including switching and gave us 73½ per cent freight and 26½ per cent passenger?

A. Yes, sir.

Q. Now, does it include switching?

A. Yes, sir.

Q. I thought you just said you did not include switching.

A. No, sir, I did not include worktrains and snow and ice. What I meant was that in reading the headings of these totals I had omitted to read "Switching," not that I had omitted switching.

Q. How much switching, relatively or absolutely, did you put on the passenger side?

A. About 5 per cent.

Q. About 5 per cent?

A. 5 per cent.

Q. And that was a matter of your own judgment?

A. Yes, sir.

Q. You had no facts to go by?

A. Those that I mentioned concerning the road, the M. & St. L., that I took for this basis here.

Q. Will you produce those M. & St. L. figures that you took for your basis here at some future time?

A. Yes, sir, I will get them and produce them.

Q. You took the total engine mileage in the state, including switch-engines, without regard to where in the state, whether main line or branch line the mileage was performed, did you not?

A. Yes, sir.

Q. And you have never undertaken to find the percentage of engine mileage between freight and passenger upon any of the branches?

A. No, sir, I have not taken up the branches.

Q. And the switching mileage was not in any way allocated to branches or divisions but taken as a lump applicable alike to each mile of track in the state?

A. Yes, sir.

Q. And the percentages that you have given us this morn-

ing are the percentages that you have used in making your statement here?

A. Yes, sir.

Q. These are the key percentages?

A. Yes, sir.

Q. And in all accounts the division or other use of which was affected by any of these percentages, like the engine mileage percentage, were handled on the basis here given this morning?

A. Yes, sir.

Q. Everything that was divided or handled in any way on the engine-mileage basis as between freight and passenger or in any other way, was upon the assumption that 73½ per cent of such mileage was chargeable to freight and 26½ to passenger?

A. Yes, sir.

Q. And so when there was a division or other operation made on the earnings basis, 75.419 was freight and 24.581 was passenger?

A. Yes, sir.

Q. And so on through the list of percentages?

A. Yes, sir.

Q. Now, what do you mean by car-movement percentage?

A. I mean the number of cars which would be necessary or which were used to handle the traffic as shown by the records of the Northern Pacific road or that, if the average loading of the car held it would require so many cars to move that freight.

Q. At the same time?

A. At the same time.

Q. To move it all at once?

A. To move all at once. If the freight was all presented at one lump instead of spaced over the year, the average loading to the car being as reported by the Northern Pacific road,

the tons being as reported by the Northern Pacific road, it would require so many cars to handle that. The percentage of empty cars on a train is a fraction over 28 per cent. To this amount, which we have determined in the way of dividing the average carload into the tons, we then add 28 per cent; we come to the empty haul dependent upon that load movement, the sum of the two giving us the freight-car movement. We find then that the average number of passengers to a car is 11.42.

Q. Persons in a car?

A. Yes, sir. Of course, you understand that in this case that does not mean the passenger-coach itself; it means the passenger train, and it is necessary to found it in that way by the use of the passengers, because the other statistics are not on the—

Q. Do you count a mail car as a passenger car?

A. Yes, sir.

Q. Do you count a baggage car as a passenger car?

A. Yes, sir.

Q. Count an express car as a passenger car?

A. Yes, sir. In order to get the movements, the statistics were not available, and we had to use the passengers as an intermediate to determine that point. Dividing that into the number of passengers for the year gives us the passenger-car movement of 162,400, which I mentioned, the freight-car movement being 530,400; giving us a percentage of 76.56 freight and 23.44 passenger. Perhaps I had better, if you desire, go into the details of that passenger division; it may save you some questions.

Q. All right.

A. Do you wish it?

Q. Yes, go ahead.

A. We divide the passenger-car miles into the passenger miles, which gives us 11.42 passengers per car; we then divide

the passengers per car into the number of passengers, which gives us the car use, or 162,400.

Q. The car-movement percentage that you used was 76.56 freight and 23.44 passenger?

A. Yes, sir.

Q. And that was used for a basis of dividing certain of the switching expenses, I believe?

A. Yes.

Q. Now, the gross-train-weight percentage, how did you get at that?

A. I was furnished by the traffic department of the Northern Pacific road with the gross weights of their passenger trains.

Q. The traffic department?

A. Yes, sir.

Q. What officer?

A. Mr. Richards' office.

Q. Is he in the traffic department?

A. He is superintendent of transportation. From that the average weight of the passenger train was 377 tons. By adding—

Q. That included the engine, did it?

A. I understood so, yes, sir.

Q. 377 tons?

A. Yes, sir.

Q. What is the average weight of their passenger engines?

A. I do not know, sir.

Q. Generally speaking, how heavy?

A. I have figures somewhere; it would be in the neighborhood of one hundred tons.

Q. One hundred tons is about the average weight of the standard engine?

A. Yes; I have that on some of my figures; I wouldn't like to make a statement on that point without referring to them.

Q. Well, I don't want the exact figure, but I just wanted your approximation from your general knowledge.

A. I think it is about 100 tons. The weight of a freight train is worked out from the average weight of a freight engine taken at 80 tons, the cars at a dead weight of 17 tons, and then the average weight is shown by the report, which gives us a total of 2,224,000 pounds or approximately 1,110 tons.

Q. Where did you get these figures upon which you make the train weight, from the Company, either Mr. Richards or some other one of the Company?

A. No, sir, I took them from their report.

Q. Tell us what you took. Give us the detail of getting at that average weight of the freight trains.

A. The average loading is 17.75 tons per loaded car; we multiply that into the average number of loaded cars per train.

Q. What was that?

A. 26.12.

Q. And is that reported, too?

A. Yes, sir. Then the number of cars to a train, which is 33.44, loads and empties combined. Multipled that by 17 tons, as the average weight of an empty car, then took the average weight of the engine at 80 tons.

Q. Where did you get that? that is the engine, tender, water and fuel?

A. Yes. I don't know where I got it now. I made some inquiry but exactly where I got that average I do not know. This gives me, on that basis, as I said, 2,224,000 pounds per freight train or approximately 1,110 tons.

Q. It seems to me your engine weight is light; I wish you would justify that figure; I may be wrong, maybe it is heavy, but from my general impression of the sizes of engines now-a-days, I should think that would be light.

A. I should say, Mr. Butler, from the subsequent figures which I obtained of engine weights, directly on the M. & St. L., that that was 20 tons light, on that basis.

Q. The chances are the Northern Pacific equipment is quite as heavy as the M. & St. L.?

A. Yes, sir; but as this figure had been put on that basis and the papers all prepared, I allowed it to go, even with that possible 20-ton basis there off. I will also say that the subsequent investigations to this show that the average of the dead weight of the car on the Northern Pacific was probably slightly less than I have allowed, I allowing 17 tons and it being 16 tons.

Q. Well, all you had to do was to look at an equipment book and make the computation?

A. Yes, sir, and the average.

Q. I don't see how any mistake could arise as to the average weight of cars because they are all tabulated by number and the weights are all there, and all you have to do is to add the weights together and divide by the number of cars; isn't that so?

A. Yes, sir, but you can't tell exactly how many times the lighter car was used and how many times the heavier. The other would be a very fair way, yes, sir. I will look that point up concerning that engine if you desire.

Q. Isn't that the way you get at your dead weight of empty cars?

A. Yes, sir.

Q. Just as I say?

A. Yes, sir, the average weight.

Q. How could there be a mistake, then, about that,—in computation or something?

A. Up to this time I had not looked at Mr. Gray's testimony in the prior case, and Mr. Gray's testimony showed 16 tons as the weight of a car, if I recollect correctly.

Q. Of what cars?

A. Of the freight car. I also made a computation—which I wouldn't like to use in this case—but I did work it out merely for confirmatory purposes, and that is by a system of algebraic book computations on the sheets that I made from two divisions when I made up my Table No. 6, Division A, using the factors; I determined a weight for a freight car and came to 15,609 for the weight of a freight car. I wouldn't like to use any such computations in this.

Q. That is an entitled-to weight?

A. No, sir, the actual weight of the car. I wouldn't like to use a computation of that kind, and I worked it out merely as a curiosity and let it go on that.

Q. In some degree confirmatory?

A. Some degree confirmatory.

Q. Your car mileage?

A. That is worked from the figures read to me from the book this morning.

Q. From the report?

A. From the annual report that Mr. Johnson read me.

Q. What does it include, do you know, empties and loads, revenue and non-revenue cars?

A. Empties and loads.

Q. Without regard to the revenue at all?

A. Without regard as to whether they were running empties or loads.

Q. Worktrains?

A. No, sir.

Q. Now, every item that you divided or used any of these factors in, you used the percentages here stated?

A. To the best of my knowledge and belief, yes, sir. It was the intention to use them; if there is a slip it is a clerical error and not otherwise.

Q. I want to call your attention to the principal account

entitled "Maintenance of Equipment" on your Table 4, and, especially later on, I will have some questions to ask you touching the repairs of workcars, but will not enter upon that now because I think it can be done as well in another connection. I call your attention to items 49, other equipment expenses; 50, supervision of equipment; 51, stationery and printing. There were items common or expenditures common between the freight and passenger business in all three of these accounts?

A. Yes, sir.

Q. How did the Northern Pacific divide them by its method?

A. I should say that Other Equipment Expenses contained some allocations, and the balance divided on a revenue-train mileage; that 50 was further divided on a revenue-train-mileage basis entirely; and that Stationery and Printing contained some allocated items, and the balance divided upon a revenue-train-mileage basis.

Q. Is it right, in your opinion, to divide the common expenditures in these items, or any of them, on a revenue-train-mileage basis between freight and passenger?

A. No, sir, I think they should be divided upon the amounts of the preceding accounts in this division.

Q. You divided them, then, on the amount of the preceding items under the head of Maintenance of Equipment, on the ground that all the expenditures in these items pertained to repairs of equipment, and inasmuch as they were common expenses and you could find no convenient divisor, you divided on the average basis of division of all of the other items under this general account; is that it?

A. Yes, sir.

Q. Well, now, do all of the items of expenses which are included in 49, 50 and 51 fall under the head of Maintenance of Equipment?

A. Yes, sir, practically.

Q. Well, "practically,"—

A. There might be some small items there that were brought in for some other reason.

Q. How about the supervision of the roundhouse (a very important item), water supply, electric light plants?—all coming under the head of Conducting Transportation.

A. In this supervision of equipment there might be items of the character you have mentioned, but if so, they have been treated as bearing directly upon the repairs mentioned above and not on any other factor.

Q. Well, then, there is another question: Do not the items in the Maintenance of Way and Structures account also benefit from supervision of equipment? Are not shops used to make frogs and switches and the like which go into the tracks and are taken care of under the Maintenance of Way account?

A. Not as a general thing, no, sir; they are generally purchased outright.

Q. Well, I mean on the Northern Pacific in Minnesota. You have repudiated our basis and have furnished us a better one and given reasons for it; now, we find that the reason fails because other accounts which are not used as elements in the division have benefited just as in the matter of superintendence which you divide on preceding items, neglecting the way-and-structures item, and isn't this another case exactly like the division of No. 35, where you have, from want of knowledge or some cause, overlooked the uses of the things accounted for in these items?

A. On this maintenance item—

Q. Maintenance of what?

A. Maintenance of equipment, supervision of equipment—there are, of course, items of work in the shop other than the repairs of the cars and locomotives; that is undoubted and

was in my mind at the time I made this division, and yet, as I considered, the preponderance of work in the shops was such that I could safely take (and did take) the division of the superintendence of equipment on the basis of the preceding accounts, which includes also the repairs of workcars as reported by the Northern Pacific.

Q. Supervision of equipment includes superintendence of the work of the master mechanic and all of his assistants and also of the locomotive engineers and firemen running in and out of the roundhouse; isn't that true?

A. That would be true as far as the supervision would occur with reference to the condition of those locomotives, I should judge, yes.

Q. And also the matter of operation, the getting of them over the road, the manner of firing to make them steam, the work of the men who operate the locomotives,—the supervision of that work is included in this item 50, is it not?

A. Oh, yes, sir, to a certain extent it is.

Q. And it is not one of the preceding items in the maintenance of equipment?

A. No, sir.

Q. Now, do you not think you ought to have enlarged your basis of division here the same as you thought yesterday you ought to have enlarged the basis of your division of superintendence, item 35?

A. To the extent that that amount of supervision (which is exceedingly limited) could be determined, yes, sir. I want to say right here, if you will allow me, that "other equipment expenses," if you will note, I have accepted the Northern Pacific division. I misstated that in looking at their equipment expenses, because the usual way would be for me to prorate that, but the Northern Pacific have a little peculiarity in handling that.

Q. What is the peculiarity? In the matter of division

is all I am concerned with.

A. The Railway Company's instructions to the accounting force are that roundhouse labor shall be allocated and that other shop expenses shall be allocated. I mean by that that the expense in shops and other equipment expenses performed in the roundhouse itself shall be allocated. This division of the maintenance-of-equipment expense under Other Expenses —having a roundhouse account and a shop account rendered it impossible for me to divide this upon the basis which I had above and I accepted their figures, being allocated, and their instructions were to allocate both these expenses and I did not divide that upon the basis of the preceding accounts, as therein stated.

Q. Are there any items of common expense in account 49, Other Equipment and Expenses?

A. Yes, sir.

Q. What basis did the Northern Pacific use for dividing the common items?

A. I don't know, sir. I say that "As their instructions were for the allocation, this division of their maintenance of equipment expenses is a mixture of these two accounts, and I am therefore compelled to accept the figures furnished by the Railway Company as allocated."

Q. You told me that there were common items there.

A. I say very probably, yes, sir.

Q. I understand that this is using the word division for common items here?

A. Yes, sir, correct.

Q. Now, if they are common items, what was the basis of the division?

A. I do not know, sir.

Q. Wasn't it the train mileage?

A. I do not know.

Q. Wouldn't it be a good basis?

A. Yes, that would be a very fair basis for 49. The engine-mileage basis, whether freight or passenger, would be a very fair basis for 49 for non-allocated items.

Q. Now, let us look at the next principal account, maintenance of road and structures. It is in this account that your great cut of the passenger expenses was made, more than $277,000 out of $418,000, is it not?

A. Yes, sir.

Q. And under this particular account you cut the passenger expense 44.6 per cent; it was in this account that you did your best work, was it not, and made the deepest cut in the passenger expense, cutting down the amount under this head, as divided by the Northern Pacific, almost in two, reducing it 44.6 per cent?

A. The largest difference occurs here and I presume the percentage mentioned is a correct one, sir.

Q. And it is in the division of the items under this account that you departed wholly from every railroad accountant you ever knew or heard of?

A. Yes, sir.

Q. And the only precedent that you have for such departure or the principle of the departure (not committing you to the details of applying the principle) is Prof. Myers, who is a member of the railway commission of the state of Wisconsin?

A. For a certain proportion of that, yes, sir.

Q. For the weather-stress features of it?

A. For the weather-stress features. There is also a difference here on the other items which are not weather-stress. Those have heretofore been taken, when any division has been attempted, as a general proposition, as you say, upon the revenue-train-mileage basis.

Q. Have you used the revenue-train-mileage basis at all for any of these factors?

A. I have introduced here the weight of the train and the switching movement for those other items which are not touched by weather-stress,—which also tends to widen the breach, as you may say, between the revenue-train-mileage basis and the basis I have used. In reply to your question, yes, sir, I have used the revenue-train-mileage basis on the snow-and-ice proposition.

Q. Anything else?

A. I beg your pardon,—Snow and Ice, revenue-train-mileage including switching; and the revenue-train-mileage I have used for the snow-sheds.

Q. Did you use the flat train-mileage there?

A. Yes, sir.

Q. Percentage?

A. Yes, sir.

Q. Attributed 45.2 to passenger?

A. Yes, sir.

Q. Cutting on some of these items, as maintenance of ways and structures, and dividing between freight and passenger, by your combination of weights, etc., as affects weather-stress items, notwithstanding 45.2 per cent of the train-miles made over the road were passenger train-miles, you have gotten down the sum of the items in these accounts to about 10 or 11 per cent, have you not,—like the wear of ties?

A. No, sir, I didn't make it that low but it reduces them very considerably.

Q. Well, what is the minimum?

A. I haven't looked, but I think the minimum would be reached, probably, on rails.

Q. Now, there is weather-stress in that?

A. I mean non-weather-stress, I mean the wear and tear.

Q. When you get down to the wear and tear of ties, notwithstanding there is 45 per cent-plus of passenger mileage,

do you not get down the amount to about 10 per cent on the wear and tear of ties?

Mr. O'BRIEN: I don't understand the question; I don't know whether Mr. Hillman does or not. I don't know whether you are referring to the total.

Mr. BUTLER: No, the wear-and-tear element of the item.

Q. If you can't answer it immediately, we will go on in order.

A. I can answer that immediately. The percentage of that wear would be 18.352 per cent.

Q. On ties?

A. On all wear items—ties, rails; while the other percentage was 45.2, a reduction of 60 per cent.

Q. In your direct examination, when you came to this weather-stress feature, you said "The best authorities on the subject follow that set out upon the decision of the Wisconsin Railroad Commission, which uses 10 per cent of the road-and-track wear of the train, and the balance, 90 per cent, to be taken care of under the head of decay or weather-stress, as it is frequently termed." I wish you would specify those authorities.

A. That is practically a quotation from Prof. Myers in the Buell case, where he quotes certain railroad accountants which I don't recall just at present, but it is practically a quotation from his statement.

Q. But your statement was "The best authorities on the subject follow that set out upon the decision in the Wisconsin case." Where has that been followed? You didn't mean that, did you? You don't know of anybody—

A. Not exactly. As I stated there, that was given, if I recollect the connection in which I spoke, concerning the amounts which should be segregated for weather-stress and otherwise, and was a quotation in which, you might say, the

Wisconsin Commission had followed these experts in their decision.

Q. What experts?

A. I forget the names which were quoted by Mr. Myers in his decision on that Buell case.

Q. Well, now, that is simply the question that some of the depreciation is due to wear and some is due to weather-stress; but the place where you make great reductions is when you come to divide the weather-stress items on net earnings, isn't it?

A. If I divided the weather-stress items on the basis of wear, on the same basis that I did the wear, it would make a very much heavier reduction.

Q. That is, after you built up your train-unit weight, instead of straight train mileage, you succeeded in reducing the 45.2 per cent passenger down to 18 and a fraction, did you not, by your weight feature?

A. I reduced it that far. I rather object to the term "succeeded" in that, because it would seem as if that was my object to reduce it.

Q. No, I will eliminate that, because I am very sure you had no object of that kind.

A. All right, sir. With that understanding, certainly; I succeeded in doing it, I agree with you on that.

Q. And that therefore attributed a great deal more to wear of all the ways and structures by the passage of the freight trains than the passage of the passenger trains?

A. Yes, sir.

Q. Doesn't Prof. Myers in his own book, in the very opinion that you quote, say that, all things considered, the wear and tear upon the track between a freight train and a passenger train is the same, or put it this way, in substance, "that it cannot be said that the wear of the passenger train is greater than the wear of the freight train?"

A. Yes, sir, he does.

Q. So Prof. Myers' method was to consider the wear equal, was it not?

A. Yes, sir.

Q. But your method (which is not his at all) considers the wear of the freight train three times as much as the wear of the passenger train, practically?

A. Two and one-half, yes, sir.

Q. Well, but taking into account your switching, the way you have used it, it makes it about three to one, does it not, because your switch-engine mileage—

A. I gave you the percentages there which it works out, which was 18.352 as against 45.2, which is just about two and one-half times.

Q. So you took Prof. Myers' weather-stress idea, and when you come to divide it you go him three to one better or two and one-half to one better, do you not?

A. I take his weather-stress idea and discard his equalization of freight and passenger train movement, sir.

Q. Now, the authorities that Mr. Myers referred to were not authorities on accounting at all, were they, but practical railroad men who had observed the effect of decay and weather upon articles; isn't that true?

A. Yes, sir, as I understood it.

Q. Now let us look at item 56, the removal of snow and ice; that item is all common, is it not, no allocations at all?

A. Yes, sir, that is a common item.

Q. In freight and passenger?

A. Yes, sir.

Q. And it means the removal of snow and ice off the track, doesn't it?

A. Yes, sir.

Q. How did the Northern Pacific divide it?

A. Revenue-train mile, I should judge.

Q. Did they use the same percentage that you have given us here for revenue-train mile, 54.8 freight and 45.2 passenger?

A. No, sir, they don't divide that by train mileage on divisions according to their method.

Q. That is the most accurate way, to apply the train mileage as a basis of division of such an item, is it not?

A. If you are treating the item—you understand it depends upon the unit that you are using.

Q. Well, I say that is the most accurate way,—to use the train mileage as the unit of division, is it not?

A. No, sir, I should say not.

Q. Why?

A. For the reason that all this investigation is taken upon a certain unit, which you are—

Q. What unit?

A. The state of Minnesota, sir. That is a matter under investigation now, and that is the unit that we have taken for the division. If we were considering the unit of a division, we would, of course, apply the factors of that division; if we were considering the Northern Pacific road as a whole from its termini East to its termini West, we would consider that as the unit.

Q. Well, I want to get at your idea. Suppose there is no snow removed at all on any part of the Northern Pacific in Minnesota except upon one branch, and train mileage is the unit of division, should train mileage in any part of the road off that branch be taken into account?

A. Yes, sir.

Q. That is to say, we will say on one branch of this road there is $10,000 spent for removing snow and ice, and that is all there is spent in the state, and that on that branch the train mileage of the passenger trains equals the train mileage of the freight trains, a round trip a day per train of each class. Now, if you divided on the basis of the divisions be-

tween freight and passenger, you would attribute half to freight and half to passenger, would you not?

A. Yes, sir.

Q. But suppose you divide on the basis of mileage in the whole state and there is only a third passenger and two-thirds freight, you then hold (and I want to get this point) that it would be right in such a case to charge only one-third to passenger and two-thirds to freight?

A. Yes, sir.

Q. And if it was the branch of the Great Northern from Kelly Lake to Fermoy, where I understand they don't carry any passengers at all, it should not be all attributed to freight, should be divided on the revenue-train mileage taking the state as a whole?

A. As long as the state is the unit under investigation, yes, sir.

Q. But, of course, you would concede, if it was all on a branch that didn't carry any passengers at all, that none of the expenditures were in fact spent to conduct the passenger business, wouldn't you? Notwithstanding that, you are treating the state as a unit, and notwithstanding that that seems plausible (of course, we are all proud of the state) yet, at the same time, the bald-headed, naked fact would be that if the expenditure was confined to a line exclusively a freight line, there would be no expenditure for removing snow and ice to run the passenger trains or conduct the passenger-train business, would there?

A. None.

Q. So then, this way of determining whether you should use the whole state mileage or only a part of it, the whole system or only a part of it, must depend upon the unit results, may result—*would* result, in the instance I have cited, (which is the same in kind though greater in degree than the actual situation) in charging something to the passenger business

or something to the freight business that didn't belong there at all, as a matter of fact, and would have to be equalized up by some consideration in the rest of the accounts somewhere, would it not?

A. Yes, sir; and yet you understand, of course, Mr. Butler, if that matter is taken and divided, division by division, as you speak of, that the result when you finish would probably be about the same. In other words,—

Q. Depend upon where the expenditure was, wouldn't it, and what the mileage was there?

A. You can conceive a case and state a case which would not come up to the average of the business which you are doing, but, on the general proposition, your averages would come down to the state unit as a basis. You can quote deviations from the average higher or lower, but when you use the average you come down to the dead level. Now, as you compare incidental instances to this average, you see the variations.

Q. Now, with respect to item 56, removal of snow and ice, you divided that on the basis of the train mileage, including switch-engine mileage; what percentage of the total train mileage is the switch-engine mileage? That is a percentage I asked for last night and forgot to call it out this morning before.

The MASTER: The Company divides on the train-mileage basis?

Mr. BUTLER: The Company, in dividing this snow-and-ice item No. 56, divides on the basis of the revenue-train mileage, locating to each division the amount of money expended for the removal of snow and ice from the track on that division, then dividing that item by the percentage of train mileage on that division which is attributable to freight and passenger business. In so far as possible, that rule is adhered to generally by the Northern Pacific Company in the matter of division, the train mileage basis.

A. About 32½ per cent.

Q. Now, let us be perfectly clear about that. The total switch-engine mileage for the year in question on the Northern Pacific road in this state was 32?

A. About 32½ per cent of the total.

Q. Of the total engine mileage; am I right?

The MASTER: Including switching?

Mr. BUTLER: Yes, including switching.

Q. That is nearly one-third of all the engine mileage, is it—switch-engine mileage?

A. I have used that percentage, calling the switching mileage train mileage and used my train mileage there. The engine mileage differs slightly from the train mileage, and I would have to run that out.

Q. I will make that clear by a question. In your division of item No. 56 you took as a basis train mileage, not engine mileage, but added to the train mileage the switch-engine mileage, and the switch-engine mileage is 32.5 per cent of that total; am I right?

A. Yes, sir.

Q. Now, I want you to tell me what per cent of the total engine mileage including switch-engine mileage is the switch-engine mileage.

A. 30.07, as shown in Table No. 3.

Q. We make it less than that, 26.83.

A. I omitted worktrain and snow and ice from that in my consideration.

Q. So your basis of division, then, would attribute to the places where switching is done, namely the switchyards, a little over 30 per cent of the expense of the removal of snow and ice?

A. Yes, sir, that would be the result, but that would be attributable to the switching.

Q. Of course, the most expensive operations, I take it, in

the removal of snow and ice, is the running of snow-plows and "bucking" snow, as they call it; am I right about that?

A. That would be a large item. Another large item is the keeping of the switchyards clear of snow and ice. You will find that when a snowstorm comes the crews are put right to shoveling and keeping the yards clear. They can't use the plows very well in the yards, and that class of work of shoveling and sweeping, which is done constantly during a heavy storm, is rather more expensive per cubic yard of snow removed than the snow-plow method.

Q. Now, in the year in question the snow was deep in the western and northern part of this state, where there were no switching yards to amount to anything by comparison with the whole, and the snow was not deep at the terminals, as I recall it; at any rate, assuming that to be the fact for the purpose of getting at the propriety of using the method which you used, do you not think it would be better to use some unit of service—the train miles and the switch miles—at the place where the snow was and where the money was expended for moving it? This change that you have made by adding the switch-engine has taken out of the passenger-expense column, as I understand it, something more than $14,000 by simply tucking in this factor of switch-engine mileage, all of which cost, in the last analysis, is added to the net profit of the passenger business.

A. The weather conditions were not taken into account; that is, as you suggest, the location of the snow which was removed was not taken into account; and I think, as I stated, that, considering the state as a unit, it is fair that all mileage, switching included, should bear its proportion.

Q. But do you say that locating the expense to the place where the work was done and dividing on the same basis at that place (train mileage and switch engine mileage) that you divided on, would be wrong?

A. No, sir, it would not be wrong if you were considering the division as your unit.

Q. No, but we are trying to find out what should be charged to the passenger business and to the freight business. You say train mileage plus switching-engine mileage is the right unit for division; now, I ask you if you spent $10,000 on a division and the question is to divide it between freight and passengers, would it not be right to divide it on the basis of the train miles and according to your theory, train miles plus switch-engine miles, on that division that uses the track and the yards where the money was spent for removing the snow? Now, would it be wrong to do that—illogical?

A. No, sir, it is not illogical to follow each factor through, division by division, if you are considering the matter as a divisional matter. If you are considering your state as a unit, I still claim that the entire amount should be charged.

Q. Now, this is the ground of the difference, isn't it, practically: up north, where the snow was deep and the money was spent, there is no switch-engine mileage to speak of, so by including 32½ per cent of units, called switch-engine mileage, all to the freight business, that has the direct effect, by taking the state as a whole instead of by divisions, of taking out of the passenger-expense column about $14,000? that is the effect of it, isn't it? whereas, if you go on and locate the place of the expenditure of the money, locate your train mileage and your switch-engine mileage over those places, the result would be that you would leave the passenger item practically as you found it, wouldn't you?

A. I couldn't say that, as the exact amount, until I had investigated the charges upon Table 5.

Q. There was furnished to you by the Northern Pacific the amounts located to divisions, the train miles located to divisions, the switch miles located to divisions and all the units necessary for you to divide divisionally on the basis that

you thought the division ought to be made—that is, per the unit—but you changed all that, put all the items together, applied the train-mile unit and then added switching, 30 per cent, and had the result of taking out about $14,000 out of this item, which adds it to the apparent net profit of the passenger business in your final analysis; isn't that so?

A. That is correct, with the exception I do not wish to be understood as approving the $14,000 until I have examined it.

Q. I don't ask you to take the time to do that. Now, in order to justify a departure from a logical method, you ought to be able to give very persuasive reasons, Mr. Hillman, for doing it; and now have you stated fully (because this is a point that will have to be decided, whether or not it is right to do that thing, as to this item and a large class of similar items where it has a like or a similar effect) have you stated fully all of your reasons why the method of divisional separation between freight and passenger is wrong and the taking of the whole state is right?

A. I have stated that as a general proposition, and still adhere to that, that the state should be considered as a unit. There are a number of side items on that, (I mean by that side reasons,) which would open up a discussion upon the subject which I don't know as I care to go into.

Q. I would like to have you state fully, once for all, the justification of using your own method as to this item 56 on the state as a whole rather than divisionally.

Recess until 2 P. M.

AFTERNOON SESSION.

Q. There was a question pending; if you have it in mind you may answer.

A. I haven't it in mind just at this moment.

Q. In respect to the division of the item 56, removal of

snow and ice, which you divided on the basis of the train mileage, plus switching mileage, regarding the state as a unit. I wanted you to tell all of the reasons why it would be inaccurate and unreasonable or wrong to make the division of this item by your units of division applied to the parts of the road known as divisions. Being an important matter on this whole subject, I would like to have your reasons so that it may not be necessary to repeat them later on.

A. The reasons for that are, as I have stated, that we have the matter of the state of Minnesota considered as a whole, that is, as the unit of division, and that, therefore, for that reason, we have used the switching mileage and the train mileage as a unit for the state of Minnesota. In addition to that, the switching mileage, you must recollect, in the state of Minnesota, though it may accrue upon a certain division at a certain point, is, to a certain extent, for use upon the entire state; the cards switched at that point being part of the traffic which passes over every division in the state.

Q. So your idea being that the switching, being a service that applies to business no matter where switching is done, out here at Minneapolis or at St. Paul, might apply to business moving over the branches, and your method of treating it as a unit would be right for that reason?

A. For that reason, together with the fact that I am treating the entire state of Minnesota as a unit.

Q. And that would hold good in all of the divisions of cost that you have here in your whole computation, would it?

A. Yes, sir.

Q. That would hold good in your divisions between interstate freight cost and intrastate freight cost, too, would it not?

A. Yes, sir.

Q. Would it hold good where you were taking the cost of a branch as the criterion for the cost of certain services on

the main line where the cost of the branch is the standard to be gotten at?

A. If I were examining for the branch itself, and considering it as a unit, I should use the units appertaining to that branch, as that is the unit under question.

Q. So that, in getting at the items of cost of doing business on a branch road, where the cost of doing the business is on the branch road you would have to segregate all items of expense to the branch itself and build up anew with it, just the same as if it were the entire road, would you not?

A. Yes, sir.

Q. And to treat the state as a unit in any of the divisions which would touch the establishment of the branch cost, to be used as a criterion of main-line cost of certain service, would be illogical, unsound, unarithmetical and absurd, would it not?

A. Yes, sir. Treated as a division, yes, sir.

Q. Now, let us come to the details of this item 56. Did you ascertain how this item for the removal of snow and ice was divided between states by the Northern Pacific? They probably had much removal of snow and ice from the tracks outside of the state as well as inside of the state.

A. On the overlapping divisions?

Q. I leave the question generally.

A. It was segregated to divisions, and the overlapping was probably upon a train-mileage basis.

Q. Well, was it upon a train-mileage basis?

A. I do not know, sir.

Q. But they separated first, all of the moneys that were spent in Minnesota, on a division wholly in Minnesota, did they, or do you know about that? Or whether they used the train-mile basis for a division of all that item of the removal of snow and ice as you used it, plus the switching mileage in Minnesota?

A. My understanding of it is that they segregated to divisions and divided the overlapping divisions.

Q. Well, it would be very important, in order to find out whether they were correctly charging up to the state its cost, to know how that item was divided?

A. Yes, sir.

Q. Did you find out?

A. No, sir.

Q. Would the train mileage be a good basis for such division of the total expense on the overlapping divisions?

A. Yes, sir.

Q. Why not add the switching for the Minnesota mileage? That is your favorite element, because certainly the switching would accrue, would it not, to that part of the overlapping division which is in Minnesota?

A. On the two branches in question it would not make a practical difference.

Q. No, but I am not speaking of the question of difference, I am speaking of the road and of the thing as a basis of division. In your opinion would it be better to add the switching mileage in Minnesota when you are getting at Minnesota mileage and add the switching mileage outside of Minnesota when you are getting at the mileage outside? or whether straight train mileage (as I am advised was used) would be the better. It is a question of method and not of amount.

A I would say that the inclusion of the switching mileage would be more accurate for the division there.

Q. That is, you think they ought to include all of the switching mileage on Puget Sound and all of the states West, do you?

A. No, sir, not at all.

Q. All of the switching mileage in the state of North Dakota?

A. No, sir; we are speaking merely of the overlapping divisions.

Q. All of the switching mileage on the Dakota end of the overlapping division,—is that the switching mileage you would add?

A. Yes, sir.

Q. And to the Minnesota train mileage would you add the switching mileage of the whole state, or the switching mileage on the division?

A. To make the division between the states I would use the switching mileage on the divisions.

Q. So that is a case where your rule that the switching work done at the terminals inures to all is not applicable, in your judgment?

A. No, sir, because there you come back from the state as a whole to that branch as the unit. If you change your unit, you change your—

Q. What percentage did you obtain on this division? Was it 71.35 to freight and 28.65 to passenger?

A. Yes, sir, it is so noted here.

Q. Prof. Myers would have divided that, would he not, the same as the Northern Pacific, or would he have divided it the same as you? Would he have added the switching mileage to the train mileage?

(No answer.)

Q. You built up Prof. Myers' method here in one of your columns on this Table 4—

A. Yes, sir.

Q. —and I want to find out how you got at the figures there. The straight train-mileage division would be 54.8 to freight and 45.2 to passenger; that is the Northern Pacific percentage. Your combination makes 71.35 to freight and 28.65 to passenger. Now, your train mileage counts more than two and one-half times as much against the passenger as

the Northern Pacific's, and, as I understood you this morning, Prof. Myers'. I want to know whether you used the same percentage of division that Prof. Myers used in Wisconsin in the Milwaukee case, or whether you used the straight train mileage which he used instead of yours (as I understood it) which, by introducing the element of weight multiplies the amount chargeable to freight by two and one-half.

A. In the removal of the snow and ice, the element of weight does not enter into it at all, and I have assumed (and I think there is, in Prof. Myers' statement the authority for that assumption, though I am not sure) that the switching mileage should be included.

Q. Well, now, is that Prof. Myers'?

A. I believe so, yes, sir.

Q. Well, then, you and Prof. Myers divide it exactly the same, do you, on this table?

A. I judge by the tables that there is a difference there. How that occurred, I do not know.

Q. Well, that is what I observed, and that is what I wanted to find out, because I understood that this was a case where you followed Prof. Myers.

A. As I would say, that would be a clerical error, that small difference there.

Q. $2,000, isn't it?

A. No, sir, $200. It would be a clerical error.

Q. Let us look at item 57, repairs of roadway and track and the following items pertaining to track. I think they all went the same,—57 to what number?

A. 57 to 65 and 67 and 68. That is all that would follow that movement directly.

Q. Were there items in the Northern Pacific accounts, in the account 57, repairs of roadway and track, that were common between Minnesota and some other state or states?

A. Yes, sir.

Q. How divided by the Company?

A. Probably divided by them on a track-mileage basis, perhaps a ton-mileage basis; I don't remember now which it was.

Q. Did you ever know?

A. I think I knew at the time.

Q. Is the track-mileage basis a right basis on which to make the division of the common items in this account?

A. No, sir.

Q. Why?

A. It is not severely accurate.

Q. Then you don't know whether they got the right result or not?

A. I couldn't say whether they had exactly the right division between the states or not in that case.

Q. Is train-mileage a good basis?

A. Very fair in this case.

Q. Better than track-mileage?

A. Yes, sir.

Q. Why?

A. For the reason it would be nearer the result than the actual track-mileage, as, to a certain extent, the movement of the train would reflect the conditions more closely as between states.

Q. Than the length of the track?

A. Than the length of the track.

Q. You think that is so in view of the physical conditions of the property?

A. Yes, sir.

Q. Of the overlapping divisions?

A. Of the overlapping divisions, yes, sir.

Q. Is train-mileage as accurate as any that you can think of?

A. That would be a very fair division for items not allocated to states.

Q. Well, you said train-mileage as used by the Northern Pacific would not do for the removal of snow and ice, item 56, and that your method was better; now, why is not that also true as to item 57, and why is it necessary to think so deeply about matters that are apparently so near alike to laymen?

A. Because, in the removal of snow and ice, as I have stated in my analysis, it is to facilitate the movement of the train and switching mileage, while the other matter is a matter of wear and not of facilitating movement. There is a distinction which I think is clear.

Q. Well, removal of snow and ice is to facilitate movement of equipment over the place where the snow and ice were; isn't that right?

A. Yes, sir.

Q. Repairing of the roadway and track is for the purpose of facilitating the movement of the train and making it safe to go over it, isn't it?

A. Yes, sir.

Q. Well, now, is there any distinction?

A. Yes, sir.

Q. What is it,—briefly and sharply?

A. The removal of snow and ice is to facilitate the movement of a train regardless of whether the train consists of one car or fifty. In repairs of the roadway and track, the fact of whether there is one car back of the engine or fifty cars back of the engine, makes considerable difference.

Q. You divided this item, did you not, attributing some of it to weather and some to wear; 10 per cent of this amount of expenditure is to be attributed to train-wear, 90 per cent to weather-stress; the train-wear you divided on the combination percentage, train gross weight, which was 81.648 to

freight and 18.352 to passenger; the weather you divided on the basis of the net earnings in one column, and on the basis of the gross earnings in the other column, at the top of which your name appears, as I got it?

A. Yes, sir.

Q. How did you get the 10 per cent?

A. I follow in that case the division of Prof. Myers.

Q. He called it 10 and 90, did he?

A. Yes, sir.

Q. Now, you didn't follow Prof. Myers, did you, in distributing between freight and passenger the 10 per cent, you followed him in getting the 10 per cent, and when you came to divide it you departed from his method, did you not?

A. Yes, sir.

Q. He would have divided that 10 per cent on the basis of 54.8 freight and 45.2 passenger; that is the train-mileage percentage?

A. Yes, sir.

Q. You divided it on the basis of 81.648 freight and 18.352 passenger?

A. Yes, sir.

Q. Now, in carrying out the Myers plan on your tables, did you use the Northern Pacific train-mileage per cent or your weight-train mileage per cent in building up the figure on Table 4, which you say would be Prof. Myers' basis?

A. The train was used.

Q. The same percentage that he would have used?

A. As I understand it, yes.

Q. And your basis of division of the 90 per cent was the same as Prof Myers', was it, of this item?

A. Yes, sir.

Q. Now, had you any fact to go by to get at the division of 10 and 90 per cent here except the fact that Mr. Myers did that in Wisconsin?

A. No, sir.

Q. And it is pure guess-work, isn't it, as far as the Northern Pacific is concerned?

A. No, sir, I do not consider that Mr. Myers guessed at it at all. I should judge, from the Buell decision, that he considered the grounds which he stated sufficient.

Q. Is there a similarity of conditions, soil and the like, in the two states on the two roads? Did you examine that to see, if Myers was right in Wisconsin, that his figure would be right here, or did you assume that Myers had laid down an infallible rule for a rock-foundation road or one in a muskeg or the average of Wisconsin conditions on the Milwaukee?

A. I assumed that the average conditions on the Milwaukee were those in Minnesota by the assumption of that factor.

Q. So, except in so far as you were justified in having confidence in a man of the reputation of Prof. Myers, this was purely guess-work, was it?

A. That and the authorities which he quotes in the decision, yes, sir.

Q. None of which applied to the Northern Pacific or the conditions of material (ties, culverts, bridges) that are on the Northern Pacific?

A. No, sir.

Q. Then you would say, would you not, as an arithmetician and logician, that this 10 per cent is without foundation?

A. No, sir.

Q. You would say that it is fully justified in logic?

A. I think it is, sir.

Q. If a preacher over there in Wisconsin had determined that, on the Wisconsin Central or the Soo, and you had confidence in the preacher and didn't know whether he ever saw the road or not or made any experiments with it, do you think, as an arithmetician and an expert accountant, if you divided

on the basis that the preacher did and because he did, that that would be logical?

A. I hardly think that I would follow ministerial directions as regards divisions of accounting; it is hardly a subject of "ministerial visitation."

Q. But if he were a political economist, you would do it—a man never employed in railroad capacity and never having anything whatever to do with it?

A. If he were a political economist of good standing and had made that subject a subject of investigation along those lines, with that end in view, I should think that his opinions would be entitled to grave consideration.

Q. Suppose it were a court who solved the same problem, by entirely different methods, after full consideration, the supreme court of the United States, we will say?

A. If the court had the facts definitely laid before them and made their decision on the facts in the case, it would be entitled to *very* great consideration.

Q. And if they determined that the percentage of decay was 90 per cent in one state and of wear and tear was 10, then, without any knowledge as to the density of traffic, the amount of use, the conditions of the bank or the material affected by the weather, you would follow the court, would you, without proving for yourself similarity of conditions? That is what you did, as I understand it, in Prof. Myers' case.

A. I would, in Prof. Myers' case, yes, sir.

Q. And you would do it if the court did it, of course?

A. I wouldn't say whether I would or not.

Q. You would take that under advisement?

A. Yes. I don't mean to antagonize the court in this case, however.

Q. Oh, no, we appreciate that you are not making any attack upon the judiciary as such. This account includes what,

generally speaking? what items are included in this account 57?

A. The cost of renewal of ties, cost of the removal and handling of rails, (I mean by that not the cost of the articles themselves, but the cost of handling them) tamping of the track, alignment of the track, raking in of ballast. The cost of ballast in this case is in these repairs and renewals of track; the cleaning up of the right-of-way, the sloping of the embankments and such things are all included in here.

Q. You say the keeping of the ballast in shape is included?

A. Yes, sir.

Q. What percentage of that work is due to weather-stress?

A. A very considerable portion of that.

Q. Well, I know, but about how much, 90 per cent?

A. Yes, sir.

Q. Or a hundred?

A. Of the ballast fully 90 per cent is due to that.

Q. Why wouldn't it be right to divide all of this on elements of use—your train mileage—the whole item? No matter what caused the defect, whether a cyclone, a storm, processes of decay, rain, a blizzard, or the wear, why shouldn't it all be divided on the same basis, the percentage of use in passenger and percentage of use in freight, getting an appropriate unit, whatever it may be? Is the fact that some of the work and expenditure became necessary on account of the weather determinative?

A. The method indicated in your question has often occurred to me as possibly being a unit which might be adopted in this case, with the principal idea of doing away with the discussion which this weather-stress matter constantly gives rise to. I have turned it over a good many times in thinking of it, and yet I think that the basis of considering the weather-stress is fairer than the other.

Q. Well, I knew that was your opinion, but I wanted to get

the reasons for it and I haven't heard you state any yet.

A. These items of keeping the matter of the roadway and track in repair owing to weather-stress would accrue even if there were no traffic over the road; they would have to be met from the income of the road.

Q. Well, if there was no traffic over it, it would not have to be repaired, would it?

A. It would necessitate absolutely that that track be kept in order. We are supposing now that the track must be kept in order.

Q. And supposing no traffic?

A. And suposing there was no traffic, yes, sir. It is rather an unsupposable case, and it is only an illustration to point the lines of reasoning. In that case, from some source or other, the Company would have to keep that track in order. There would be no movement of traffic to which to charge it, and it would have to be kept in order by money obtained from some source. The moment that the road then became an earning proposition, supposing that it was put in order, this expenditure of money would have to be taken care of; it would have to be taken care of from the revenues of the Company unless it was capitalized, and, in that case, the revenues would have to apply upon the capitalization to pay the interest on such capitalization. So in this event this expense would necessarily apply to the revenues of the road and have to come out of that. Applying that method of reasoning to the peculiar condition which we have of these weather-stress items accruing on the road itself, we would then class them as I have classed the supposititious case and take them from revenue derived from the traffic.

Q. That argument would apply to a large number of items just as well as it would to these, would it not, included in this 57,—your last statement, assuming no business and an obligation to keep the thing in repair? Now, if you would as-

sume that as to your locomotives and cars, the same argument would apply for a division on the weather-stress or revenue basis, wouldn't it?

A. Not to the extent that this would, because the cars are presumably worn out in the revenue service and by the absolute use of the freight on them and in conducting the freight. There is a small element of destruction by weather in the cars which had not been taken into account.

Q. In the rail it is 10 per cent weather-stress, in the steel rail, is it not?

A. I have assumed that as the stress, yes, sir.

Q. In a box-car is it less than that?

A. I do not know, sir. I have made no investigation on that subject.

Q. If the cause of the expenditure of the money is the weather, you think it ought to be divided on the revenue basis?

A. Yes, sir.

Q. So that if it freezes, where the earth heaves when filled with water, heaves in frost and puts up a bulge in the track, it has to be taken down with shims put in to elevate the other part of the track to ease the bump till spring comes and then an adjustment of the roadbed,—that should be divided on the basis of revenue?

A. That is the basis, yes, sir.

Q. But if it should rain on the track and the same frost which heaved the track in another place should make ice on the track and you had to take the ice off the track, then you would divide it on the train-mileage basis and charge nothing to the weather-stress because the whole of item 56 is divided on a unit of use; is that right?

A. That is correct, sir.

Q. And the reason for the difference I would like stated, of the two instances I have cited, in the record.

A. The removal of the snow and ice is directly related to the movement of trains; it is gotten out of the way for the movement of that train—and by train I mean including the switching movements, you understand,—

Q. Yes.

A. —and is, as you might say, a direct operating expense, while what you cited where the track is put up and down—

Q. "Heave" is the railroad word.

A. Yes, sir,—is due to the weather-stress, has to be corrected, and is part of the damage which accrues through the rust or—

Q. No, the heaving doesn't cause rust.

A. I say which accrues from the weather-stress.

Q. Doesn't snow and ice come on the track because of weather-stress?

A. Not in the sense that I have used it, sir. You use the weather-stress as the destruction through outside sources which would be attributable to train wear.

Q. But the heaving of a track by reason of disturbances in the broken bank is not attributable to train wear, is it?

A. No, sir.

Q. Any more than the freezing of ice on top of the track is, is it?

A. No, sir.

Q. So they stand exactly alike, do they not?

A. No, sir,—I think I stated the difference between them sufficiently.

Q. Very well, if you are satisfied, I am.

A. Yes.

Q. How did Mr. Peabody divide this item in his method 1 and his method 2, or how did he divide it in these columns?

A. It would be on the train-mileage basis, switching included.

Q. That is 1 of Peabody's?

A. Yes.

Q. The other would be the same as the Northern Pacific?

A. Yes, sir, with the understanding of the divisional unit as against the Minnesota unit.

Q. How much of the switching mileage did you attribute to the passenger business in these divisions?

A. 5 per cent.

Q. And this 73½ per cent freight and 26½ per cent passenger includes 5 per cent of the switching mileage as passenger mileage?

A. I believe so, sir, yes, sir.

Q. Is there any doubt about it? I want to be sure, because it leads to great confusion if it turns out that your impressions in that are wrong. I am not asking this to annoy you, but I would like to make certain about that.

A. I should say that the percentage of switching attributable to passenger was in the percentages I have given.

Q. You say that to be the fact?

A. Yes.

Q. 5 per cent of all the switching?

A. Yes, sir.

Q. Why didn't you make it 8 per cent? Some of your experiments as to the appropriate per cent show 8, as you told us; why didn't you make it 8 instead of 5?

A. Because on that division where I made it 8 per cent in that regard I was dealing with items which I had to bring back from other points, and in each bringing back of those items there would be a percentage which had been left out or not carried to its full extent, and as those matters were not at first intended for that purpose, I preferred to take up the matter practically as shown in the M. & St. L., of 5 per cent. Now, as I understand it, the Northern Pacific, in their treatment of the matter, in this have used about 6 per cent for this basis.

Q. Well, are they right?

A. They might be for that road, yes, sir. It might vary; that 5 per cent that I put here might vary to 6. I was looking at another matter, and I found a 6 per cent variation which could be attributed to that result, and I judged from that that they were using a 6-per-cent basis, though I do not know that they are.

Q. Did you make any investigation into the statistics to see whether 5 was right on the Northern Pacific?

A. No, sir, I accepted it as—

Q. Accepted 5?

A. Yes, sir.

Q. From whom did you get that?

A. From the M. & St. L. I took 5.

Q. Well, I know you accepted the 5 per cent from the M. & St. L.; that you thought was right and thought that would apply to the Northern Pacific?

A. Yes, sir.

Q. Well, did you establish that it was right on the M. & St. L., or did you take somebody's say-so over there?

A. I took the M. & St. L. records and found that it was 4, 6, 7, and I simply converted it to 5 even and brought it over.

Q. And that is the only justification for that 5 per cent?

A. Yes, sir.

Q. Do you think that speed of train has any effect on the question of wear or tear of the track?

A. Yes, sir, it has some effect, but as in the construction of the tracks to take up the speed of the trains at the curves, this has been minimized, and, in my opinion, is at present a negligible quantity as regards it increasing the wear on the track.

Q. You think speed is not an element in the wear on the track or is negligible?

A. As the tracks are adjusted for speed, it is a negligible quantity. If you will allow me to explain for a moment, the impact from speed would occur at the commencement of a curve, would continue holding the engine to the rails around the curve, and there would be a slight impact as it left the curve; that has been minimized by the use of the parabolic curve instead of the circular curve which is on other roads, and the elevation of the outer rail on the track is made now to accommodate and to hold faster passenger trains, so that when a freight train reaches that curve and comes around the curve the flange of the wheel is wearing on the lower or inner rail of the curve in your freight-train movement; and when the passenger train comes along it is thrown out and its speed is directed against the outer rail on the curve, and for that reason I have considered, as that is a matter of adjustment by all companies, (to equalize the wear of the track,) that that wear was equalized and that the speed, as I stated, is a negligible quantity.

Q. Does Prof. Myers agree with that?

A. No, sir, he uses the train-mileage basis. There is another matter which I haven't gone into and which I wish to go into more, as I understand there have been some experiments on this matter, and that is the point of counterpoise of the driving wheel on the rail. You understand if a wheel was counterpoised equitably for a movement of 35 miles an hour, if you drove that engine at 40 you would disturb that equipoise because the compensating weight is at a greater distance from the center of the driver, and that would necessarily strike a small blow on the track each time it came over. On the contrary, with the freight-train engine, or an engine pulling the freight at a lower speed, if its speed was below the speed at which the engine was counterpoised, there would be a slight blow as the piston-rod side of the wheel came down; but that is a matter of refinement in which I have no idea

what the result would be, but I mention it to show that there are elements—

Q. You are a civil engineer, are you not?

A. Yes, sir; and those matters—

Q. I knew no man could know all these things who was not a civil engineer.

A. —I would like to look into, I haven't had time to look into them; and yet I will admit, Mr. Butler, that some of those points may have a bearing on this case, and as far as those points from investigation do have a bearing on subsequent cases, I shall adopt their findings if I can find time or opportunity to do it.

Q. I want to ask, without going into the reasons for it, whether it is in accordance with the general learning on the subject that speed is not an element in wear and tear upon a track properly built, or whether it is. I don't care for the reasons but just for the conclusion of the learned men on that question.

A. I do not think that the speed as regards the wear on the track is a very considerable item.

Q. It is negligible, you think?

A. I think it is negligible, yes, sir.

Q. On a straight track or a crooked one, assuming the track to be well built?

A. Yes, sir.

Q. That is your view. Now, what is the general consensus of opinion of experts in the railroad world upon that question?

A. I don't know, sir.

Q. If speed is an element to be taken into account, your unit for the division of all these non-weather-stress items in this large account is wrong, is it not, because you neglect to introduce the element of speed into your factor?

A. Yes, sir.

Q. Now, do I understand that you hold, as a civil engineer

and expert railroad accountant, that it costs no more to maintain a track for the performance of speed like the Twentieth Century Limited on the Pennsylvania road (if that is the road it is on) or the Lake Shore, than an ordinary freight-train speed of half as much, assuming the same wheelage and same weight?

A. In putting up the track for the Twentieth Century Limited as against a track which you would use for freight purposes, the expenditure to get that track into order to stand the faster traffic would have to be considerably greater.

Q. It would be enormous, wouldn't it?

A. Having that track in order, having that track in the condition which it should be, then the wear on that track from the faster speed and the wear on that track from using it in the slower speed would be, I think, practically a negligible quantity; but, as you understand, you would have to have a better track for that purpose as an original investment. On the other hand, had you the lower-grade track, your wear of trains using that would be much higher and your repairs would be more on account of the poorer condition of that track. Now, I don't feel competent to go into that to state the amounts.

Q. No, I wouldn't ask you to do that.

A. Because I haven't been in the engineering department for a great many years.

Q. I want to ask you one question, founded on my experience as a farmer living near a railroad bridge that was weak, and the railroad managers used to make the trainmen run their trains slow over the weak bridge. Was that because speed made a difference or because the managers were mistaken?

A. That I do not know, sir.

Q. Do you know whether it is as safe to run over a weak or dangerous bridge at sixty miles an hour as it is at six, as-

suming the same weight of train and character of wheelage —a straight bridge?

A. I don't know, sir.

Q. If you are right that speed does not add to the stress and wear of structures, then you should answer that the speed over the weak bridge would not make any difference; it logically follows, does it not?

A. It would seem to follow from that, yes, sir.

Q. Well, that is the fact, isn't it? It is the fact that it is dangerous to run a train over a weak roadbed or bridge at a high rate of speed, where it might be comparatively safe to run it at a slow rate, isn't it? That is the fact, isn't it, known to everybody?

A. Yes, sir.

Q. Then you ought to have included the element of speed in your factor here, ought you not?

A. I think not, sir.

Q. Notwithstanding that speed does increase the wear?

A. You are speaking of the safety, not of the wear, Mr. Butler.

Q. Well, the safety from breaking down, not from derailment but from breaking down, giving way, starting and stopping and all that,—which is not a wear item.

A. That is due to faulty construction, which we are not considering here.

Q. But it requires more stress to break it, and the fast train gives it more stress, will wear it more, won't it, the bridges and rails and everything; if not, what is your weight in here for? If not, weight may be neglected, may it not?

A. You can hardly neglect the weight passing over the track as an element of the wear, and at the same time I see the point that you make, and I would say, in regard to that, that there is undoubtedly a basis for that, which you make, that the speed would increase the stress in the nature of it

putting a sudden strain on a structure rather than a gradual strain upon that structure.

Q. The faster you bring a hammer down the harder it hits, isn't that true?

A. There is an element of that, yes, sir, but that illustration does not apply to the extent of striking the hammer; the impact that would add to the weight of the hammer, the impact of the blow.

Q. Now, in view of your confidence in Prof. Myers about other things, don't you think he was right on this question of speed as being an element in wear and tear?

A. No, sir, I have never been able to agree with him on that.

Q. Well, why didn't you take it on faith, the same as you did the main division? Because your experience was to the contrary?

A. Because it seems so self-evident that the matter must be a matter of weight that I couldn't get away from it, sir.

Q. Well, is it self-evident that speed is not an element in it?

A. I still think it is practically a negligible quantity. There might be some allowance made for the speed, and I have thought—

Q. Can you cite me to the opinion of a railroad accountant, engineer or authority upon the subject, who will sustain your view that you have expressed here that speed on the question of wear and tear upon track and structures over which the train passes is not an element or is negligible?

A. I can't cite anyone that would agree with me on the subject, possibly, but you must remember, in speaking of it as a negligible quantity you mustn't understand me that speed does not do these things that you speak of, but the adjustment for that speed (as I mentioned in the curves) will make a wear for the lesser speed or for the lack of speed which

would practically offset, in my judgment, one against the other, in the matter of wear.

Q. Let us confine ourselves to a straight track so we will get at the speed "negligible." Do you not stand alone among authorities on the subject when you say that the question of speed as bearing upon wear and tear is negligible? Are you not standing alone?

A. If you come to the absolute question of speed, yes, sir; if you come to the absolute question of the adjustment for that speed, I say no, sir. As you will note, if you happened to read the Buell case, that matter is spoken of by Prof. Myers in his discussion, that the adjustment of the higher speed, passenger equipment for that speed lessens the wear and the blows which the track receives, and that the freight, unadjusted for that higher speed, gives the track the wear; and where I differ from him is that the speed is sufficient to overcome the difference between the weight of a freight train and the weight of a passenger train. That is the point of difference, not claiming that speed is not an element, but differing with him in the effect (you might say the tonnage effect) of that speed, he treating it in this case as if the effect of the speed of the train were such that it overcame the extra weight of the freight train, as well as the adjustment of that freight-train equipment for traffic.

Q. The passenger trains are the faster trains, are they not?

A. Yes, sir.

Q. In order to meet the public demand and get the passenger trains over the track fast enough to suit people, certain track adjustments at curves must be made in order that the train will be safe and will not derail or disturb the passengers?

A. Yes, sir.

Q. Those are very expensive?

A. Yes, sir.

Q. And would not be needed at all as far as the freight business is concerned?

A. No, sir.

Q. And the expenses added, therefore, should be charged as a part of the plant to the passenger business?

A. No, sir.

Q. Well, it should be charged—

A. On the other hand, the exigencies of the freight, with the increased loading of the cars, the increased weight of the cars, the increased equipment,—

Q. You don't understand me.

A. —would, on the other hand, necessitate heavier expenditures on their account.

Q. I hadn't spoken of freight.

A. No, sir, but I did.

Q. Did you do that to avoid answering my question or to answer it?

A. To answer it, sir.

Q. Now, these expenditures, made necessary to accommodate the speed of the passenger trains, ought to be charged to passenger business, oughtn't they, or ought they to be charged to freight business?

A. If they are made fully and wholly necessary by the increased passenger speed, the excess of that cost over what it would be to put them in the order necessary for the slower movement, would be a legitimate charge to the passenger traffic.

Q. There isn't any doubt about that, is there?

A. No, sir.

Q. Now, having done that, having attuned the track, so to speak, for fast passenger speed, the slow freight trains do not apply the same stresses that the fast passenger trains do, but other and different ones, as you have described here in technical terms,—

A. Yes.

Q. —which has a tendency to tear down the track because it is attuned to the passenger business; isn't that so? whereas, if it were not for this fast passenger business the adjustment would be appropriate for the heavy, slow freight-train business; is that true?

A. Yes, sir.

Q. So this demand for speed inhering in the passenger business is because, first, of the expense of making the adjustments necessary, and, second, because of the abnormal wear and tear over the track adjusted for high speed by the slow freight trains, isn't that true?

A. Yes, sir, that is true for that point. On the other hand, you must remember that you haven't (as you have stated) gone into the exigencies of track repair and heavier rail, and so on, demanded by the heavier freight traffic to which we have referred; we haven't gone into that.

Q. Some railroads have exclusive passenger tracks, do they not?

A. Yes, sir.

Q. There are some between St. Paul and Minneapolis, are there not?

A. I do not know, sir.

Q. On the Manitoba road?

A. I believe there are, yes.

Q. There are four main tracks over there at least, are there not?

A. I don't know.

Q. Two used for freight exclusively and two used for passengers exclusively?

A. Yes, sir.

Q. And in the older parts of the country that is a very important thing, is it not?

A. Yes, sir. The New York Central have four tracks, I

believe, from New York to Buffalo.

Q. Heavy rails tend to safety at high speed, do they not, —less give in them?

A. Yes, sir.

Q. And on the fast exclusively passenger tracks, the country over, they have just as heavy rails as they have on the busy freight tracks, do they not?

A. They lay the same rail on each, I believe.

Q. So that the point you made that the exigency of the freight business makes a heavier rail would not seem to be of uniform application, would it?

A. No, sir, and yet the heavier rail was not required exclusively by the passenger traffic, is the point I make.

Q. Or the freight traffic either?

A. But it is the increase in the demand for both classes of service which has introduced the rail. My objection is not so much to the fact that the passenger required as heavy a rail as the freight, but that the passenger should be taken as the exclusive requirement of the heavier rail.

Q. Oh, no, nobody claims that at all. You formed the idea that the freight required the heavy rail to offset the extra cost of the adjusting to curvature, and now it appears that the passenger fast tracks take just as heavy rail as the busiest freight track the country over; isn't that the fact?

A. They are laid with the same rail, yes, sir.

Q. So there was nothing in your point, was there?

A. That is a statement, not a question.

Q. Well, do you think there is?

A. Yes, sir.

Q. I can't get you to change your mind about it. I guess, so I won't try.

A. I would say, parenthetically, (I don't care whether this is taken down or not,) that I have endeavored very earnestly lately to obtain from those eastern lines which have that

trackage, the up-keep of the two classes of track, but as yet I haven't been able to do it, and I hope some day to do so.

Q. That would be of great value to us, I am sure.

A. It would be of great value to everything connected with it, and might possibly compel me to change my opinion, Mr. Butler, but I would like to see it anyhow.

Q. It might turn out that 10 per cent was not the right percentage for wear and tear there, might it not, on more mature inquiry?

A. Yes, sir.

Q. It might turn out that 90 per cent wasn't enough for the weather-stress and that you ought to divide even more than 90 per cent on the revenue basis; that is, you might get a comparison between the up-keep of the exclusively passenger tracks and the up-keep of the exclusively freight tracks?

A. I would like that very much; it is a possibility that that would change the factors which I have used in this division.

Q. Before we leave this subject I want to ask you whether it is not laid down by standard authorities on maintenance, in substance that speed is a factor, and that tonnage multiplied by speed is the basis for the measurement of certain elements of wear and tear, especially upon the rail.

A. I have never seen it, but I believe a formula has been published to that effect.

Q. Who is the standard authority in this country on that subject of track maintenance?

A. I don't know, sir.

Q. Do you know W. M. Camp, and are you familiar with his work Notes on Track? Has it not been a standard work on that subject for a long time, used commonly and generally by railroads in the country?

A. I have not seen Mr. Camp's book.

Q. Never heard of Mr. Camp, either, did you?

A. I have heard of him but I have not studied his work.

Q. What is his occupation or position, do you know?

A. I really do not know at present, but I have seen quotations from him in various articles.

Q. In so far as you know, you stand alone, do you not, on the idea of holding that speed is negligible in this matter?

A. I suppose that I do stand alone in the statement that the speed as a factor is offset by the factors on the other side, of non-speed. You will recollect when I spoke of this matter that I did not claim that speed was a negligible quantity, but I did claim that the other items which entered into the problem were such that I concluded that speed could be neglected, and I explained that the difference between Prof. Myers and myself on that point arose not from the neglecting of speed as a factor, but by my minimizing the effect of speed as a factor in the case.

Q. In your basis of division of the wear-and-tear items in this great big account here, you have not applied the element of speed at all?

A. No, sir.

Q. You have neglected it completely?

A. I have omitted it, yes, sir.

Q. And I am now distinguishing between the tables and your explanation as a civil engineer; your tables are founded upon the hypothesis that speed cuts no figure whatever in the problem of track maintenance?

A. That is right; it has been omitted from the consideration.

Q. Now, doing business with the position indicated on your tables and not your explanations as a civil engineer, (which really were so technical I didn't follow them so as to possess them) your position is then unique and alone, is it not; that is, the position upon which you have made up your account in this exhibit?

A. Absolutely.

Q. Now, if speed were taken into account, it would increase the passenger expense, would it not, because the passenger trains are the faster trains?

A. Speed unoffset by other conditions, yes, sir.

Q. That is what I intended by my question. And if it were given the effect that it is usually given in such problems, it would increase the amount chargeable to passenger by a large sum, would it not,—more than ten per cent of the total?

A. I should say approximately ten per cent, yes, sir.

Mr. DURMENT: Of what total?

WITNESS: Of the total amount which I have charged to passenger under the account maintenance of road and structures. That difference would be approximately shown by the difference between double-column 3 on Table 4 and double-column 4 on Table 4, one reading $376,698.53 (in double column No. 3) and the other, in double-column No. 4, reading $344,291.31.

Q. That is 10 per cent of the whole item, is it not, of the whole account?

A. 10 per cent of the whole amount charged to passenger by me, not quite 10 but practically 10.

Q. How many dollars would that be?

A. The difference in dollars is $32,407.22. Not quite 10 per cent; approximately.

Q. And that is compared with Prof. Myers' basis?

A. Yes, sir.

The MASTER: Well, that is because you decline to follow Prof. Myers with reference to the effect of speed?

WITNESS: That is because I have taken the weight of the train as the factor instead of ignoring the weight and taking the train mileage as a factor in the items which are chargeable to wear; and in that it is practically as you say, that I have considered that, in allowing the offset for the speed which Prof. Myers has done, there has been too much al-

lowed to the element of speed and have therefore reduced it to the weight basis rather than to the even train mileage basis.

Q. The Northern Pacific divided all of these common items, did it not, on the basis of revenue-train mileage?

A. I think so, yes, sir.

Q. And Prof. Myers adopted some combination,—this weather-stress business, so as to divide on revenue, —and his basis would reduce the Northern Pacific charge to passenger cost in Minnesota from $621,812.71 to $376,698.53, (being a reduction of $245,114.18,) and then you come along and disagree with Prof. Myers and reduce him some $32,000 more?

A. Yes, sir.

Q. And if you had divided the whole items on your basis, —that is, if you said this, that no matter what makes the wear and tear of the track or the repairs necessary, whether it is weather or what it is, we will divide it between passenger and freight on the units of use, and if you had used the same units to divide the whole of these items as you did to divide the 10 per cent, I would like to have you give me the figures, if we just ignore the weather as a cause of repair, as you did in the snow-and-ice problem.

A. Ignore the cause?

Q. Ignore the cause; whether it is rain or snow, or a use or a trespasser, or the cutting of weeds—due to weather, because the weeds seem to know when spring comes.

A. There are some items here which are small, it would be necessary to divide, which would make considerable work, but I would say that it would very closely approximate, on that basis, $303,600.

Q. What does that figure?

A. If, instead of using the gross earning basis for the weather-stress, I had used the wear factor which I had introduced in this connection, it would give us in the neighbor-

hood of $303,600 instead of $344,000 which I have used.

Q. You have used $344,000, and if you had divided it all on the basis of use, using the same factor, it would have given you what?

A. About $303,600.

Mr. O'BRIEN: Attributable to passenger?

WITNESS: Yes, sir.

Q. Now, if Prof. Myers had not invented this weather-stress item, his basis of division was exactly the same as that of the Northern Pacific Company—

A. No, sir, because—

Q. —the train-mileage basis?

A. —he would have introduced in that his switching miles as a wear—

Q. Now, he divided 10 per cent of this item 57 on the same basis that the Northern Pacific divided it all, did he not, a varying quantity, sometimes 10, in the case of his rails, 90? He divided 10 per cent of item 57 on the same basis that the Northern Pacific divided it all, average train mileage, 54.8 freight, 45.2 passenger?

A. Yes, sir.

Q. Now, had he divided the whole of these items on the same basis that he divided the elements which he calls wear and tear, his division would have been exactly the same as the Northern Pacific's, would it not, to a cent?

A. Yes, sir, I believe it would.

Q. Therefore it follows, unless the cause of the necessity to repair furnishes a reason for the change of unit of division between freight and passenger, the Northern Pacific is in exact accord with Prof. Myers,—whom you follow in so many things?

A. Yes, sir.

Q. That is right, is it?

A. I believe that is correct. I do not know whether Prof.

Myers in that train mileage introduced his switching basis or not.

Q. You told me he did not, I think, to-day.

A. I do not think he does. I think he said revenue-train mileage; that is my recollection of it. I do not know whether he did or not. In your matter here as it has been set up, (the Northern Pacific method) of course, you know that there is no switching mileage considered in that division of these items.

Q. Now, do you hold, as a matter of accounting, that if some trespassers who caused a damage which required the expenditure of a considerable sum of money, in dividing it between the freight and passenger account any different basis of division should be used than if the like amount was required on account of wear?

A. I have made no distinction in reference to that, sir, at all in the accounts.

Q. There shouldn't be any, should there?

A. No, sir, that goes in with the sum total of the deal.

Q. In getting at the percentage costs, on a line like the Great Northern from Fermoy to Kelly Lake, where they don't carry any passengers, would you divide the problem 10 per cent to wear and tear and 90 per cent to weather-stress, divide the 10 per cent on the basis of gross weight train mileage, or charge that all to freight and then divide the 90 per cent on the basis of revenue in the entire state derived from freight and passenger business?

A. No, sir, I would not do that.

Q. How would you do that?

A. Because I would either treat the Fermoy division as a unit or treat the state as a unit. If I were treating the division as a unit I would not mix the state with it. If I were treating it as a state matter, on the other hand, I would not consider the fact that there was no passenger traffic on that

division. I would not mix the units.

Q. You would charge it all to freight, would you?

A. If I were considering that division solely—

Q. In this litigation?

A. No, sir.

Q. How would you divide the wear on the track on what is known as an exclusively freight part of a road between freight and passenger, not used for passenger at all?

Attorney General YOUNG: We are not fixing the rates on the Kelly Lake to Fermoy branch.

A. I have stated, I think, that that would be part of the unit which was under examination, which is the state of Minnesota, and that that expense, the weather-stress, I would say, would receive its portion as shown on the state unit, freight and passenger.

Q. Assume a big exclusive passenger yard, and you have before you the amount of money spent to keep the track in repair: in these items here would you charge any of that to the freight business? No matter how you divided it now, would you charge any of it to the freight business in a litigation of this character? And when I said *would* you, I meant *ought* you to.

A. The repairs and renewals of that track would come under the general operation of this unit rule which I have mentioned and would be apportioned between freight and passenger.

Q. And you would charge under your basis of division about how much of that?

A. I don't know, sir.

Q. You would charge about half your percentage?

A. Oh! Yes, sir.

Q. More than three-quarters of it you would charge to the freight business, wouldn't you?

A. Yes, sir.

Q. Now, the Northern Pacific has a circular passenger coach-yard here on Mississippi street, has it not?

A. I do not know, sir.

Q. Well, now, do you think that it is right, as a matter of accounting, to charge up to the maintenance of the tracks and yards over which there is no freight business ever done, to the freight business?

A. Yes, sir, on an item where it is treated as a common expense and is—

Q. I don't want to confuse it by a matter of bookkeeping. You have $10,000 to keep up the repair of that coach-yard, we will say.

A. Yes, sir, I should treat that as a—

Q. You have that, you are told where it is and what it is; now, should you charge any of that $10,000 to the freight business?

A. Treating the state as a unit and having it under consideration we would be compelled to charge that in that way.

Attorney General YOUNG: You mean the business of the company in the state as a unit?

WITNESS: Yes, sir.

Q. And so the Northern Pacific has some exclusive freight yards, has it not?

A. Yes, sir.

Q. And you think, if you had before you the amount of money required to maintain the tracks and the yards and renew them each year, that a certain portion of that ought to be charged to the passenger business, even though the instrumentality is not used at all, is that right, for the passenger business?

A. Yes, sir, we would have to charge that to the unit basis.

Q. Let us get off of the yard question and inquire into an exclusively passenger depot; should the maintenance of that be charged, any part of it, to the freight business, the build-

ing itself, the waiting room, used for passengers exclusively? As a matter of railroad accounting, should you charge any of it to the freight business where you have the items before you segregated?

A. Not where you come to the building, no, sir.

Q. And no part of a freight house should be charged to the passenger business?

A. Not as far as it can be segregated, sir.

Q. What is the line of cleavage between the switching yard and the building? What is the reasoning for that? The state is still a unit, isn't it?

A. Yes, sir. That would be a very difficult question to answer.

Q. It can't be answered, can it, except by saying there is no line of cleavage?

A. I think it can be, sir. I would like to consider that a few minutes.

Q. Reserve your answer on that. Bear it in mind lest you forget it. While you are on that subject, if it is right to charge up the repairs of an exclusive freight track in part to the passenger business, why is it not true as to locomotives and cars used exclusively in the freight business? In other words, if in part of the plant or instrumentality which is used exclusively for one you have a part of the maintenance and renewal or repair to it charged to the other, why should not that principle be followed consistently through the whole accounting? You may reserve your answer on that if you would like to, unless you want to answer it now.

A. I would simply state, on that latter proposition, that the cars, passenger cars and work cars and so on, all passenger cars and freight cars and locomotives for the use of passenger and freight are distinctive for those uses and have not been considered in the way mentioned.

Q. But my hypothesis was that the yard was distinctive;

that the track, as, for example, the Mississippi street passenger yard in this city, all exclusive freight track from Minnesota Transfer to Northtown Junction, are concrete examples.

A. You in that case are supposing that the absolute repairs and everything connected with it in regard to a freight institution and a passenger institution are carefully segregated and kept absolutely separated?

Q. My questions assume that the items were segregated when the expenditure was made, and I expressly ask you not to take into account any bookkeeping difficulties.

The MASTER: Perhaps he had better reserve an answer to that.

WITNESS: I will let that go, with your permission, until the next session.

Adjourned until Thursday, July 8th at 10 A. M.

FEDERAL BUILDING, St. Paul, Minn., Thursday, July 8, 1909, the hearing was resumed at 10 o'clock A. M.

CONWAY W. HILLMAN,
recalled for further cross-examination, testified:

By Mr. BUTLER:

Q. When we stopped the other day, Mr. Hillman, there was pending a question; the substance of it, as I now bear it in mind, was this: you had told us that in dividing between passenger and freight the cost of track maintenance, a railway yard used exclusively in the conduct of the company's freight business should be considered as a part of the whole system in the state (the unit) and a part of the expense of maintaining such freight yard should be charged to passenger business, and, conversely, a part of the expense of maintaining an exclusively passenger yard, like the Mississippi street coach-yard here, for illustration, should be charged to the freight business; you also

had told us that a freight house, used exclusively for the freight business, should be charged, as far as the cost of maintenance is concerned, to the freight business, and that a passenger depot should, as far as maintenance of it is concerned, be charged to the passenger business, and, in like manner, the maintenance of freight cars to the freight business, and the maintenance of passenger cars to the passenger business; I had asked you, assuming that you had before you the expenditures, and neglecting any bookkeeping difficulties that there might be, to give me the reasons for so treating these items.

A. In the matter of this "line of cleavage," as I believe you denominated it at the time, between freight and passenger use of track and freight and passenger use of buildings, I would have to say that, while you can draw the line quite distinctively in the use of buildings from their broader base of allocation and thus obtain a factor which is reasonable in its nature as between freight and passenger, you cannot do this in the freight and passenger track business, the factors of allocated expense in this regard are too limited to base your deductions upon in the method that you do in the buildings; that is, that should we allocate a track expense to freight or passenger, it would necessitate an elimination of that factor from all the factors which are necessary to be included in that unit for the state, and that with each allocation of this character there would be a further elimination from these unit factors and that therefore the use of the unit system for the state in the matter of the division of track expenses is the proper one.

Q. It is undoubtedly logical, is it not, to charge to each branch of the business, freight and passenger, items of maintenance cost of the facilities used exclusively for either one to the appropriate business?

A. Yes, sir, that is logical, and intended to be covered in my answer when I made the statement, as I have just done, that the allocation which you would then make would necessitate the

elimination from the remaining factors of certain items which would create a great deal of detail and a certain amount of what you might call uncertain eliminations; and that therefore I have, you might say, discarded the allocation, if there should be any, of those items, and taken the unit for the factor of division.

Q. If it is logical to do it, it ought to be done if it can be done; am I right?

A. Yes, sir.

Q. And the reason, as I understand your answer, that it cannot be done, is that your method or system applied in the preparation of these tables is inadequate to the following of a strictly logical division?

A. It is not carried into sufficient detail for that, sir.

Q. Your system is not complete enough for that or the method that you used was not full enough in detail for that?

A. That is correct, sir.

Q. Now, suppose, by way of illustration, that conditions justified the Northern Pacific road in building another line between the Twin Cities and Duluth, to be used exclusively in the freight business, and you were dealing with the maintenance of way and structures, grand account, in the problem that you have had before you, would you still say, or would you say as applied to that condition of affairs, that a part of the maintenance of that exclusive freight track and the structures used in connection with it should be charged to the passenger business, or, conversely, the expense of maintaining an exclusive passenger line between the Twin Cities and the Head of the Lakes should be divided between the freight and passenger expenses?

A. If that line were used exclusively for freight and I had between the same termini what might be termed an exclusive passenger track, it would give me what I desire very much and that is the relative factors for the use in making the division of track wear between freight and passenger; and I think on a

line of that character and of the use that you mentioned, having the distinctive factor, that I should be very much inclined to use that factor for the division in the rest of the state; it certainly would have to be taken under very careful consideration in making any such division.

Q. I don't know whether your answer is in the affirmative or in the negative to my question; can you tell me, yourself?

Last question read.

A. I consider a factor of that size as a proper basis for division according to the expenses accruing on each line.

Q. I yet do not know with certainty whether you intended to answer affirmatively or negatively.

A. I have answered that affirmatively, dependent upon the conditions which you have mentioned and the size of the factor.

Q. That is, you would divide the expenses of maintaining the exclusive freight track between here and Duluth between the freight and passenger business and charge to the passenger business a part of that?

A. Yes, sir; for the reason that on the division such as you mention I would have my complete factors for, you might say, everything, and for that reason.

Q. And if there were an exclusive passenger track from here to Duluth, you would charge a part of the cost of maintaining that passenger track and its structures to the freight business?

A. No, sir; you misunderstand me, or I have misunderstood the drift of your question. I said I would not.

Q. You would separate them?

A. I would separate them, yes sir.

The MASTER: And that was the way you intended to be understood in your former answer?

WITNESS: That was the way I intended to be understood in my former answer.

Q. I asked the last question to make it perfectly clear. So then, the size of the item of maintenance of an exclusive in-

strumentality for use in one or the other department determines, according to your method, whether the item shall be divided between freight and passenger business?

A. The size and the completeness of the data which would be available to me in handling it.

Q. And, going back for this question, to the Twin City-Duluth illustration, the weather-stress factors would be the same as now, would they not?

A. Yes, sir.

Q. Why, in such a case, ought not the large amount which you have attributed to weather-stress be divided between freight and passenger on the basis of the rates or the earnings, gross or net, even if one track be used exclusively for freight and one exclusively for passenger?

A. Because, as I have stated heretofore, that were I able to obtain a factor which would indicate that division conclusively and of a broad enough base to base deductions on, it would be a preferable factor to the use of weather-stress or any other item which could be used; and yet, as the matter stands now and as it stands as a general proposition, I consider the weather-stress item and the method of handling it on the gross-earning basis as a proper factor.

Q. That is, it is the best you can get under the circumstances, and that is the reason you used it, is it not?

A. It is to my mind that which approximates most nearly and clearly the best that we have on that thing.

Q. And its value depends wholly, does it not, upon the percentage of the items that you attribute to weather-stress?

A. Yes, sir, the amount divided on weather-stress.

Q. If you attribute to weather-stress more or less than you ought to under the circumstances, the value of your factor and your result is to that extent impaired?

A. Yes, sir; there would be a different result obtained according to that division.

Q. And all of your weather-stress percentages were taken without inquiry, from the decision in the Buell case, which was adopted by Prof. Myers in the Wisconsin passenger rate case against the Milwaukee road?

A. Not all of them, no, sir.

Q. Which ones were not?

A. The matter of the amount of weather-stress on bridges and the amount of weather-stress on rails were not taken from him.

Q. What was the difference between you and him on those items?

A. He assigned the entire amount of wear on bridge to the stress and the entire amount of rail to the wear.

Q. So nobody before you, so far as you know, ever charged to rails ten per cent or any other per cent to weather-stress, did they?

A. No, sir.

Q. So far as you know, that is an invention of yours?

A. Yes, sir.

Q. And no weather-stress division of wear and tear on bridges ever separated that item before, did it? Mr. Myers charges it all to weather-stress?

A. I am not quite sure on that point without reference to Mr. Myers' method, for just a moment, as to whether it was the increase from ten per cent weather-stress or ten per cent wear on the bridge to fifteen, (which I have taken) or whether it was the whole amount from Mr. Myers.

Q. You just told us—that is the reason I asked this question—

A. I know I did, sir.

Q. —that Mr. Myers charged all of the wear and tear on bridges to weather-stress; is that right?

A. I think it is, yes, sir.

Q. Well, assuming that you were right about that, you are

the first person, then, that ever divided it?

A. Yes, sir.

Q. You divide it fifteen per cent wear and tear and eighty-five per cent weather-stress?

A. Yes, sir.

Q. Did that include culverts?

A. Yes, sir; bridges, trestles and culverts.

Q. And you charged 90 per cent of the rails to wear and tear, and 10 per cent to weather-stress?

A. Yes, sir.

Q. Comparing the rails with a steel bridge or a concrete culvert, should the percentages weather-stress and wear and tear be alike or different?

A. They would be different, sir, in my opinion.

Q. To the extent of 85 per cent weather-stress for a concrete culvert or a steel bridge and only 10 per cent weather-stress for a rail?

A. Yes, sir—

Q. In your opinion that would be right?

A. On those items of the bridges, trestles and culverts.

Q. I am speaking of a steel bridge and concrete culvert.

A. You can hardly separate the entire item in that way; you have got to take the trestles into consideration there.

Q. Well, I want your opinion as to rails and a steel bridge and a concrete culvert with respect to the propriety of making the same or different division on account of weather-stress and wear and tear.

A. Yes, sir, the 85 per cent is a fair basis for the weather-stress in the one, and the 10 per cent for the weather-stress in the other.

Q. A wooden bridge and the rail, an ordinary pile bridge, what would be fair for weather-stress and wear and tear?

A. The average there—

Q. I am not speaking of the average, I am speaking of an instance.

A. The instance I would consider to be fair there, for the reason that the weather-stress on a pile and trestle bridge and the wear from the train movement on a pile and trestle bridge would both increase and be greater than the culvert or the steel bridge; I should consider that they retain approximately their relative positions.

Q. That is, the relation of the wear and tear compared with weather-stress is the same on any bridge, whether it be wood or iron or steel; or any culvert, whether it be a vitrified pipe, galvanized iron, or made of planks or slabs; am I right?

A. Not exactly, no, sir; you are not exactly correct.

Q. Then let me modify the question so we may have clearly your views: To compare steel structures with wooden structures, weather-stress and wear and tear bear the same relation in both?

A. I would say practically, yes, sir.

Q. Wooden and concrete, weather-stress and wear and tear bear the same relation in both?

The MASTER: Bridges?

Mr. BUTLER: Bridges, yes, sir.

A. I think practically the same, yes, sir.

Q. Steel bridges and stone arch culverts and wooden bridges and stone arch culverts, all the same?

A. I think the relative factors would be the same.

Q. Give me the reasons for these conclusions, based on any experience, authority or observation that you are familiar with.

A. Granted the fact that there is a weather-stress and that the wear is 15 per cent and the weather-stress 85—

Q. You are assuming that, are you?

A. Yes, sir,—you have got to assume something to start with—you would have a factor of wear upon your steel structure from the movement of the train which would probably not

be as severe as in the case of the same on a wooden structure; at the same time, the weather-stress upon the steel structure would not be as great as upon the wooden structure, and therefore I should think that in that case (and I have so assumed) the weather-stress in each case would bear the same relation to the total depreciation of the bridge, as you might call it, from both stress and wear, as the wear of the train in each case.

Q. I recognize, of course, Mr. Hillman, that this is a difficult problem, involving great learning in engineering and accounting and so on, and I therefore wanted, if I could, to have you, in addition to your own personal reasons which you have quite fully given, give me the statement of any one familiar with such things as an expert.

A. No, sir, I couldn't give that to you, sir.

Q. Is there any authority on the subject that you know of, or is it simply the result of your own analysis and study of the subject?

A. It is the result of my own analysis and from what reading I have done.

Q. Well, now, is there any reading on the subject?

A. Reading principally from the cases which have been heard and from odds and ends of magazine articles and from such engineering works as you pick up from time to time in looking over the matter; it is an accretion rather than a study in which I could name authorities.

Q. Well, isn't it really more than an accretion? isn't it a result of study and reflection and so new in its application that it may really be considered a contribution to the learning on the subject?

A. I would hardly like to consider what I have done in that respect, and I would say—

Q. Well, nobody else ever did it before, nobody else ever reached these conclusions before you told us, there is no

authority for it; is it not, therefore, (and you should not be over-modest about such a matter as that) a contribution to the learning upon this subject? Now, isn't that a fair way to put it?

A. No, sir, I should consider it in this regard, Mr. Butler, that it is a statement which I have assumed from a limited study of the subject, and which I think is correct and which I would be very much pleased to have corrections from men who have made a study of engineering for years.

Q. Well, now, is not the conclusion that the wear and tear factor bears the same relation to the weather-stress factor upon a steel bridge as it does upon a wooden culvert, upon a stone arch bridge as it does upon either, a step so far in advance of any conclusion that you have ever come across of any scholar upon the subject or any expert upon the subject, that it may properly be called an addition to the learning upon that subject?

A. I hardly would like to answer that question.

Q. Well, don't you think it is an invention, pure and simple?

A. No, sir, I should designate it as an assumption.

Q. Yes, pure and simple?

A. Not to that extent.

Q. Without precedent in opinion or support in observation or experimentation, isn't it, and you can't cite precedent and opinion or an experiment or observation which will justify the conclusion, either made by yourself or anyone else who has ever studied railroad track maintenance?

A. I would say that I think what facts we have on the subject, which are principally quoted in the Buell case, are sufficient for that assumption.

Q. Aside from the Buell case you can't cite any authority, can you?

A. No, sir.

Q. And the Buell case holds it all due to weather-stress,

does it not, as to bridges, and you hold 85 per cent only due to weather-stress and 15 per cent to wear and tear?

A. Yes, sir.

Q. So you can't cite the Buell case, can you, as a support for the contention that you have made here of the equality in relation between weather-stress and wear and tear in all manner of structures within a track?

A. I supposed, when I answered the last question, that you were referring to the general idea of weather-stress.

Q. No, we have agreed that this is an invention.

A. If you refer to the bridge itself, I will state that that is from my own thought on the matter, that a portion of the destruction of a bridge must necessarily be wear, and in that idea I have assumed 15 per cent as the proper basis.

Q. That is an assumption, pure and simple?

A. An assumption, yes, sir.

Q. Without support in any authority, experience or experimentation, isn't it?

A. Without support from outside authority, yes, sir.

Q. Or any experience or experimentation of your own?

A. Yes, sir.

Q. And what we have said as to these percentages, weather-stress and wear and tear, in all the so-called weather-stress items, indicates that the amount of the percentages is an assumption pure and simple, just as it is with respect to the item of bridges which we have now been talking about?

A. Yes, sir.

Q. And that assumption is wholly without support, is it not, by authorities experienced in the subject, by observation or experimentation of yourself or anyone else, as far as you know? Now, I would like that answered categorically, because it sums up; and don't go back, unless it be necessary, to the whole field again.

A. The amount of the percentages due to weather-stress is

undoubtedly an assumption. There have been various methods or various estimates made of this that have been quoted, but there is a variation as regards the amount which should be attributable to this weather-stress, and therefore I repeat what I said at first, that the percentages which have been arrived at are, to a certain extent, assumptions.

Q. You told me they were assumptions pure and simple; you told me they were undoubtedly assumptions, and now you say they are, "to a certain extent," assumptions?

A. I mean by that that the amount of percentage, 10, 15, 17½, are assumptions; that there is some basis of it weather-stress is undoubted; the amounts which are mentioned are assumed. That is what I intended to convey by my answer.

Q. Can you cite me an instance supported by the opinion of any experienced man to justify each of the percentages which you have assumed?

A. No, sir.

Q. There are none in existence, are there?

A. Not outside of those assumed by Prof. Myers.

Q. And Prof. Myers, as far as you know, never was employed an hour?

A. I have no data whatever of Prof. Myers' employment. I know nothing of his employment prior to the time I met him, and, in fact, I do not know now, beyond the fact that he is commissioner, whether he is, as I have heard he is, connected with the university of Wisconsin or not.

The MASTER: You say "assume"; is that an arbitrary assumption, or an assumption based upon reflection and observation and judgment?

WITNESS: I base that, sir, upon the matter which came from the Buell case, plus certain items where reading it I do not agree with him, and therefore it is an assumption on my part as to the percentage.

Q. Now, if it should be held in this case that division of

these items charging a certain amount to weather-stress and a certain other amount to wear and tear ought not to be undertaken, and if Prof. Myers' method of dividing what he calls the non-weather-stress items be followed, then the result of division in this account would be precisely the same as that made by the Northern Pacific Company, would it not, to-wit, the revenue train mileage?

A. Revenue train mileage, plus switching, I believe.

Q. Well, now, have you not told us that Prof. Myers' division of the 10 per cent due to wear and tear—

A. Was based on a revenue train mileage, yes, sir. I believe that is—

Q. And the same percentages which we wrote down at the last hearing, to-wit, 54.8 to freight and 45.2 to passenger—

A. Yes, sir.

Q. That is the Northern Pacific revenue train mileage basis, is it not?

A. Yes, sir.

Q. So, then, my question should be answered in the affirmative. If division be not made between weather-stress and wear and tear at all, but Prof. Myers be followed, (that is, the method of Prof. Myers in dividing what he calls the non-weather-stress items in the maintenance of road and structures account,) the division would be precisely the same, would it not, as the Northern Pacific Company's.

A. With the slight exception of their treating matters divisionally and he treating them as a unit in Minnesota.

The MASTER: Does it make any substantial difference in the result?

WITNESS: Yes, sir, it would make quite a substantial difference in the result of the maintenance of way and structure items, in the neighborhood of $220,000 more expense to passenger than—

Mr. O'BRIEN: Oh, you don't understand the question.

Mr. BUTLER: No, manifestly he doesn't.

Mr. O'BRIEN: The question the Master asked you was whether it would make a substantial difference whether it was divided divisionally or treating the state as a unit.

WITNESS: Oh. I should say it would be substantially the same figures. The difference would not be heavy and might be considered negligible in that respect. I should say, off-hand, from generally going over these matters, that it would make very little difference.

Q. Now, if it should be determined that the weather-stress scheme of division should not be followed as to these maintenance of way and structure accounts but that all of the items should be divided between freight and passenger as you have divided the non-weather-stress items, then 81.648 per cent would be attributed to freight and only 18.352 per cent attributed to passenger, against 54.8 per cent freight and 45.2 per cent passenger, as found by the Prof. Myers method and the Northern Pacific Railway Company's method; am I not right in that?

A. Yes, sir.

Q. By your train-weight idea introduced into the train-mile factor, neglecting the element of speed and disagreeing with Prof. Myers that the wear and tear of a passenger train on the track is the same as that of a freight train, you have, as to all the items in this account, reduced the amount chargeable to passenger from 45.2 per cent to 18.352 per cent, have you not?

A. I believe those are the percentages or approximately so.

Q. Well, they are the percentages you gave us?

A. Yes, sir; but there is one item here which I don't think I can pass that question over without explaining, without answering it.

Q. All right, which one is it?

A. And that is, that, in the Northern Pacific method (which you have denominated it,) the factor of switching is entirely neglected and no wear to any of the maintenance of way and

structures, no wear to rails, road-bed and track and ties is considered as due to switching. Now,—

Q. Isn't that confined to the places where the switch-engines do not go?

A. Now, as the switching mileage is certainly a factor and as the rail for the entire state has to be renewed and the ties have to be renewed and as the switching mileage certainly wears them, no matter whether they happen to be in the yard or outside, we come to the fact that in this a large percentage of the wear has been neglected in the Northern Pacific method. The switching mileage, if I recall it rightly, is 2,204,809 miles out of a total of 6,626,689, and that factor has been neglected in making this division and should be considered in this.

Q. The first column is the Northern Pacific Railway method, used generally by railroads the country over, is it not?

A. Yes, sir.

Q. That would divide these items as we have stated, 54.8 to freight and 45.2 per cent to passenger, would it not?

A. Yes, sir.

Q. Prof. Myers' method, on your column 3 here, divides the non-weather-stress item by the same percentages, as you have told us; am I right?

A. I believe so, yes, sir. I am going to look into that matter.

Q. Mr. Peabody's method No. 1, in your column 2, does it on the same method, does it not?

A. Yes, sir.

Mr. O'BRIEN: You said the same, do you mean—?

Mr. BUTLER: The same percentage.

WITNESS: Using the revenue-train mileage as the factor.

Mr. O'BRIEN: Well, there is a difference between Myers and the Northern Pacific, and you said "the same, Peabody"; I don't know what you mean.

Mr. BUTLER: He said Mr. Myers' non-weather-stress items

would be the same as ours, so if we get rid of the weather-stress items the result would be the same.

Mr. O'BRIEN: You are now only referring to the non-weather-stress items.

Mr. BUTLER: Yes, when I refer to Myers.

Q. Now, Mr. Peabody has no weather-stress factor in his problem?

A. No, sir.

Q. And his division in No. 1, in column No, 2—which is the Peabody No. 1 division—

A. Yes, sir.

Q. —would be the same as the Railway Company's method and Prof. Myers' method of the non-weather-stress items in this maintenance of road and structures account, and would divide 54.8 freight and 45.2 passenger?

A. Practically.

Q. Peabody No. 2, as you have worked it out on Table 4 of this exhibit, makes the division on the train-mileage basis adding switching and charging all the switch mileage to freight, does it not?

A. Practically all, yes, sir.

Q. Now, you told us when we first cross-examined you, that the Peabody No. 2 method was a proper method, or reasonably so, and one which had been promulgated; now, I want to hand you a copy of this writing that you furnished us of Mr. Peabody's and have you cite and read into the record from that paper the justification for your assertion that division between freight and passenger of the maintenance of road and structure items should be made on the basis of the revenue-train mileage plus switching mileage, switching all charged to freight.

A. I suppose this is a correct copy; I will assume it is.

Mr. JOHNSON: That has been compared, yes.

Q. Give me under what item you are reading.

A. Superintendence. "Between passenger and freight all

superintendence expenses are treated as common expenses."

Q. Where is that? I don't find it.

A. At the foot of the page, last item. "Are divided between passenger and freight in the audit office on the basis of the respective train mileage."

Q. There is nothing about all switching mileage added and charged to freight, is there?

A. No, sir, but this matter was taken up with Mr. Peabody personally by me, and the question was asked him directly if the switching mileage was a factor in that, and he said most decidedly it was.

Q. Well, I didn't intend by my question to call for conversations with Mr. Peabody; I intended by my question to have you point out in this paper, that you produced as the justification for your Peabody No. 2 method, the justification that you find therein. Now, go on. Eliminating conversations, I want you to point out on this paper.

A. On that I do not see how I can—

Q. It isn't in the paper, is it?

A. —point out on this paper unless we have a distinct understanding as regards to what Mr. Peabody meant when he spoke of his train mileage, and I think that I am entitled to the explanation which I obtained from him personally as regards that.

Q. I will give you a chance to make your explanation, but I want first to find out whether in this paper which you have presented as the Peabody method your statement that the division of these common items in the maintenance of road and structure account according to the Peabody method No. 2 on your Table 4 is upon the basis of train mileage plus engine mileage, switching engine, switching engine mileage treated as freight—I want to see if the paper does it.

Mr. DURMENT: Well, Mr. Butler, if I may suggest here, if

the term "train mileage" was used, it might be upon that basis or it might not.

Mr. BUTLER: Yes.

Mr. DURMENT. It might say this excluded or this included; it might say train mileage, and it might include it.

Mr. BUTLER: Why certainly, but I want to find out whether the paper shows it or not, and then if it doesn't we will find out what further authority he has for the division of the items used in the paper, and Mr. Hillman is entitled, and shall have full opportunity, to define train mileage.

WITNESS: The items as noted here for maintenance of way and structures are marked, with one exception, as between passenger and freight, "treat as common, audit office divides between passenger and freight on the basis of respective train mileage." That exception is the docks and wharves where between freight and passenger it is "locate direct."

Q. Well, we did that,—you did that?

A. Yes, sir.

Q. There is a small item of docks and wharves on this, and you located it direct all to freight, didn't you? That is only $17 on the paper.

A. Yes, sir, a small item.

Q. You had before you, did you, when you directed the making of Table No. 4, and especially that part of it which is denominated Column 6, Peabody, including switching, this working memorandum for distribution of operating expenses between operating divisions, main and branch lines, and between passenger and freight, which you say you procured from Mr. Peabody, of the Santa Fe road, and which you said went into effect on that road July 1, 1907?

A. I don't seem to have brought that Peabody paper down with me; I forget the exact date which was on the side of that paper; it may possibly have been copied here, I don't know; I

think it is on the cover effective such a date, if that was the statement.

Q. Well, that was the date you gave us, I am pretty sure.

A. If that was the date I gave, it was read from the cover of the paper that I had, sir.

Q. Well, you did have the paper before you, did you?

A. I had the paper before me, I recollect that.

Q. Now, the wording of that paper was exactly the same, as respects divisions on respective train mileage, as are similar memoranda used by the clerks in the Northern Pacific office, and provided by the department for their guidance; is that right?

A. I don't know, sir; I suppose it is, sir.

Q. Yes.

A. I say I suppose.

Q. The substance of it is the same, is it not?

A. I suppose so, sir; I couldn't say.

Q. And the substance is exactly the same, is it not, as would be appropriate instructions for the division on the Peabody basis indicated first on your Table 4, which is marked at the bottom "Obsolete," and is column 2?

A. I suppose that would be the case.

Q. So then, as respects the particular items that we have been talking about in the maintenance of road and structures account, there was not, or at any rate, there was no need of there being, any change on the Santa Fe July 1, 1907; the same instructions were in fact used, were they not? There was not a change at all?

A. Column No. 2—

Q. I mean as respects these items.

A. Double-column No. 2 represents the Peabody method used upon the assumption of the fact that the respective train mileage is a revenue-train mileage. Column No. 6 is upon the assumption that the respective train mileages include switching

account; double-column No. 2 was introduced by me principally to show the effect of a unit system as against a divisional system. Double-column No. 6 was based upon the understanding that I had with Mr. Peabody as regards his meaning of train mileage, which was to include switching mileage in his train mileage. At what time the Santa Fe commenced to treat switching mileage as part of the train mileage I do not know.

Q. Did it ever commence?

A. I do not know.

Q. Did Mr. Peabody tell you that it ever commenced? Now, *commence*, as a matter of routine, in the office of that company.

A. I don't remember that our conversation took that form at all. My recollection of it is the fact which I was after at the time, which was that he did include switching mileage and that it should be included.

Q. Do you know of a memorandum for the division between freight and passenger where the phrase "train mileage," or, to be accurate, "on basis of respective train mileage" is used? do you know of a company anywhere in this country or elsewhere that ever construed that train mileage to include switching and add the switching to the freight train mileage as a matter of bookkeeping?

A. No, sir, I should judge where they used the term "respective train mileage" I should assume, if I had no other method of determining the matter, that they meant the revenue train mileage.

Q. And if you were the auditor of the Santa Fe road and Mr. Peabody the comptroller or head of that accounting department handed you this paper, which you have produced here in this court as your justification for column No. 6, you would have divided between freight and passengers the items in the maintenance of way and structures account on the basis that the Northern Pacific did, would you not?

A. If I had no method of determining the matter and that

was the final instruction, with no other final direction, and with no other instruction, I should do so, yes, sir.

Q. And every railroad accountant would be justified in construing the instructions included upon this paper to be revenue train mileage as defined here in this case?

A. I do not think that he would be justified in doing so unless he would refer the matter to the headquarters or the statistician or the official issuing the instructions.

Q. Is not every instruction by every company that you are familiar with worded substantially the same, and are they not always construed by the accountants of the company to mean revenue train mileage as defined here, which would be 54.8 to freight and 45.2 to passenger?

A. That would be the general construction, yes, sir.

Q. Now, in view of the fact that it is general upon the railroads over the country, and so construed by all the clerks and subordinates, if it were handed to you as a subordinate, would you not so construe it without going to headquarters to ask him what he meant?

A. If I were a clerk in the office, yes, sir.

Q. Did you not intend, when I first cross-examined you, to have us understand that now and since July 1, 1907, the Santa Fe road did, as a matter of fact, divide the items in the maintenance of way and structures account between freight and passenger on the basis of revenue train mileage plus switching mileage, all switching charged to freight, and did you not produce this paper which you then said that Mr. Peabody told you to "keep in your clothes," as the justification for that statement?

A. I certainly produced that Peabody statement to justify the division made in double-column No. 6. The statement as to keeping it in the clothes was with reference to the copy which he gave to Mr. Yapp, which was not my copy. There were no instructions with my copy whatever. It was given to me freely

without any question, and it was only because I did not have my own copy and that I had Mr. Yapp's copy that I made that statement.

Q. Did you not by your testimony then intend to have us understand that the method which I referred to in my last question was actually being applied on the Santa Fe?

A. Yes, sir; that was my understanding.

Q. You told me this morning that you didn't know anything about it, and that you could not recall that Mr. Peabody ever said anything about it, and that if you were to construe these instructions as they are construed the world over you would divide as the Northern Pacific did. Now, I am trying to get at the justification for the testimony which gave me that impression.

A. I can only repeat what I said that I went to Mr. Peabody personally for a definition of that "respective train mileage," discussed the question of the inclusion of switching with him, and had his approval of the fact that the switching should be included. Whether he follows that on the Atchison, Topeka & Santa Fe I do not know, I could not tell.

Q. He never said he did, did he?

A. I don't know, I don't remember.

Q. He never said it to you, did he?

A. I don't know. He made that basis. I don't know he didn't follow that at all. I came to him with the question of switching mileage and asked if that was not a factor and it should not be included, if it wasn't his intention to include it, and my impression was when I left, or the absolute fact when I left was that the switching mileage should be included in the "respective train miles," and on that basis the division is made. Now, the question as to whether or not Mr. Peabody follows that, whether or not the Atchison divides on that, does not come into this question at all; it comes to the question of the division on the inclusion of the switching mileage as a factor in the wear.

Q. Peabody No. 1 in column No. 2 and the Northern Pacific are very close together, are they not—about $25,000 apart on the passenger expenses?

A. They are closer than that, Mr. Butler. There is a clerical error in that first item there, if you will notice, of the removal of snow and ice. You will notice there is a clerical error there where the figures have been taken approximating the figures shown on the other division and that should more nearly approximate the Northern Pacific method.

Q. Well, less than $20,000 we will call it.

A. It would be in the neighborhood of $10,000 difference on that item.

Q. And on the division of the whole business from top to bottom, including all accounts, only about $85,000?

A. Yes, including this first item, which is an error, it would be in the neighborhood of $60,000, which reflects the difference, you might say, in the unit as against the division.

Q. Now, this in column No. 2 is, as a matter of fact, the method followed by the Santa Fe, under Mr. Peabody's direction, ever since they have dealt with the problem, is it not?

A. That, as I told you, I cannot say. I have not divided their divisions.

Q. Well, as far as you know it is?

A. No sir; as far as I know, Mr. Peabody treats the switching mileage as part of the train mileage.

Q. Well, when did he change? You marked this "Obsolete," and then (let me finish this) you go to column No. 6 on the Peabody method No. 2, and you reduce Peabody method No. 1 in column 2 in the passenger item from $597,259.72 to $408,037.57?

A. Yes, sir.

Q. The first you marked obsolete, the same as you did the Northern Pacific, and the next you told us, as I understood you, was a recent adoption of the Santa Fe, dating July 1, 1907?

A. Yes, sir.

Q. And then you incorporate that total with Hillman No. 1, with Hillman No. 2, with Prof. Myers' method, and take an average which you write in No. 7?

A. Yes, sir.

Q. As being the average of modern methods?

A. Yes, sir.

Q. Now, I want you to tell me now if any man living ever told you that the Santa Fe changed from the Northern Pacific method, or the method general among railroads, to the method that you have set up in column No. 6.

A. No, sir, they did not.

Q. And it was upon the conversation which you detailed with Mr. Peabody, that you have already repeated, that you found justification in marking column No. 2 on Table 4 obsolete and column No. 1 obsolete?

A. No, sir; you mistake that entirely. The "obsolescents"—to quote our friend Myers of the Interstate Commerce Commission—

Q. He used that with respect to a car, didn't he, and not with respect to an account?

A. Yes, sir, but he used the word,—of those items are that they have their uses which are distinctive from the division into freight and passenger on more close and accurate methods; and the term "obsolete" is used as a warning that I do not include them in any of the subsequent apportionments or in the average of the last four columns.

Q. That is, the method which was followed, as you told us, generally by railroads all over the country—

A. Yes, sir.

Q. —practically without exception, within your knowledge, you marked obsolete on this paper, as your justification for not including them in the average of the last four columns (except the seventh) here?

A. Yes, sir; and also the fact that they are not correct, and no one that I know of contends that they are more than what might be called a gross (not in the way of erroneous) approximation—a rough approximation of the results.

Q. I got the impression from something you said when we resumed your cross-examination the other day, that *your* methods, twenty major operations and factors, every one of which was an approximation and no exact factor in any but three, I drew the inference that your conclusions were at least approximations, and if being an approximation is a justification for marking them obsolete, I should think that somebody might hold that we ought to mark yours obsolete.

Mr. O'BRIEN: Well, if you are going to argue it now, possibly I ought to reply to that.

A. The assumption of the term and using it, "obsolete" there, was an unfortunate one on my part. It was not intended to convey the impression that as far as these methods go they were not in use, you understand, but it was to show—

Q. That they were no good?

A. —"no good,"—it was to show how the old methods would bring it out compared with the methods of Myers, the method including the switching, (and a method which I have worked out on two bases,) and it was for the purpose of calling attention to those so decidedly that it could not be mistaken that I assumed no responsibility for those things that I marked them "obsolete." I will admit that the term "obsolete" is a little ill-chosen and from the first has been a subject of criticism, both here and privately to me.

Q. Let us look at your account No. 57. That account is entitled Repairs of Roadway and Track, is it not?

A. Yes, sir.

Q. And in that account are charges for quite a variety of items of labor?

A. Yes, sir.

Q. Can you give us what such items are, the character of the labor, that we may, upon the detail, test the propriety of your division between weather-stress and wear and tear,—which was, I believe, 90 per cent weather-stress and 10 per cent wear and tear of the total item 57, was it not?

A. Yes, sir; it is pretty hard to quote those things from memory and get them all in there, but, of course, there is the up-keep of the track, tamping—

Q. Well, can't you refer to the items (haven't you them before you) in some way?

A. Not here, no, sir. I will bring that down if you desire, I will bring that down with me—

Q. I have a memorandum here including certain of the labor items included in your account for labor: raising and tamping low track, lowering track, lining track, tightening track-bolts and spikes, putting in new bolts and spikes, laying new rails, distributing new ties, laying new ties, piling and burning old ties, cutting weeds and grass, handling track material, repairs of track, tool-and watch-houses, renewals and repairs of frogs and switches, general cleaning about stations and of right-of-way, ditching, putting ballast under track, patrolling track; are all the items which I have read in this question included in item 57 on your exhibit Table 4?

A. Yes, sir, that covers the general division pretty thoroughly.

Q. Referring to these items of labor included in account 57 under the title of Repairs of Roadway and Track, these items make up a large percentage of the total of 57, do they not?

A. Yes, sir, quite large.

Q. About how large, within limits?

A. I don't know, sir; I have a detail that I could find out from, I think, showing the labor which would apply to this account of roadway, and track.

Q. Well, would it not, in determining the justness of the per-

centage attributable to wear and tear and the percentage attributable to weather-stress (which you divided 90 weather-stress and 10 wear and tear) be of some importance to analyze this account and determine what the moneys were paid for?

A. Yes, sir.

Q. Did you do it?

A. No, sir.

Q. Why?

A. I did not take them item by item and analyze them; I took the 10 per cent only, on the basis that I have mentioned.

Q. Well, take raising and tamping low track, did you form any idea of how much of that was weather-stress and how much wear and tear,—or any other item in the list?

A. Raising and lowering track and tamping I did make some inquiries concerning.

Q. From whom?

A. From the section foremen, old hands at the business,—

Q. Which ones?

A. Concerning the—I can't recall their names.

Q. On the Northern Pacific?

A. Not on the Northern Pacific, no, sir.

Q. When did you make those inquiries?

A. Oh, from time to time as I would meet these men; as you are traveling around you meet a good many, and I inquired from them and had a talk with them on that subject.

Q. What did the section foreman tell you was the proper percentage of weather-stress for raising and tamping a low track?

A. This man had been a foreman—the one I have in mind now had been a foreman in the north and was then on a division of the L. & N. in Kentucky, and he seemed to think that in tamping the track and keeping the track in order, which you might say was putting it on a level where the ballast is sunk

or pushed up, the entire amount of that was due to the weather and the elements.

Q. That is, that section foreman's idea was that the labor for tamping a track where ballast had been pushed up was all due to the weather, that the passage of trains over it didn't have anything to do with pushing up the ballast?

A. Very little; that was his idea; practically nothing.

Q. You adopted his views?

A. Oh, no, sir, I merely used his views as confirmatory of what I had already done. At that time I had already accepted the 10 per cent.

Q. That is your view, that where trains go by and push up ballast and it has to be tamped down, that is all weather-stress?

A. No, sir, that is where the work would come in.

Q. It is all train work, isn't it?

A. Yes, sir, that is where the work would come in.

Q. So you thought this section foreman was wrong, didn't you, and that it was not in weather-stress but by wear?

A. No, sir, not all, by a great deal.

Q. Well, he told you, as I understand you, that tamping of track where the ballast had been pushed up was all weather-stress?

A. Was all weather-stress, yes, sir.

Q. That is what his opinion was upon that, but you thought it was all train wear?

A. No, sir, I thought that he should make some allowance for train wear in it, and I have allowed 10 per cent for train wear.

Q. Now, the lowering of the track, what do you think should be train wear and weather-stress?

A. I have assumed all on the 10 per cent basis, sir.

Q. Lining the track?

A. The lining on the same basis.

Q. Surfacing; you think that is right, do you?

A. The surfacing would, in my mind, if taken by itself, require a little more percentage to train work than the 10.

Q. Tightening track-bolts and spikes, how much weather-stress in that?

A. In tightening the bolts there would be considerably more than 10 per cent attributable to the train wear.

Q. How much more do you think?

A. Well, that I couldn't say.

Q. 90?

A. That would be a matter that I could not say. I should say, roughly, that there would be more than 10 per cent.

Q. It would follow the depreciation, would it not, of the track-bolts and spikes?

A. I am leaving out the spikes at present; I am speaking just merely of the bolts which are on the fish-plates.

Q. Well, the bolts would follow the renewal of the things that the bolts fastened together, would they not?

A. Yes, sir, under track fastenings they would, yes, sir. This item would not, though, sir. This is merely the tightening of the bolts, if you remember, not the placing of the bolts. The other part comes down under your other Track Material; putting in new bolts would be under Track Material.

Q. Putting in new bolts would be 10 per cent weather-stress and 90 per cent train wear, the same as the price of the bolts?

A. Yes, sir, I put that in the same as the rail; and renewal of fastenings on the same basis as the rail.

Q. Now, the laying of the new rail is quite an important item of labor in account 34; it takes lots of work, doesn't it?

A. Yes, sir, there would be considerable work in that.

Q. How much weather-stress in that labor item?

A. We have allowed them there the 10 per cent.

Q. 90 per cent?

A. 90 per cent on weather-stress, yes.

Q. And you have allowed for the renewal of rails only 10

per cent weather-stress; isn't that true?

A. Yes, sir.

Q. Do you think it right and logical to do that? The cost of the rails to be renewed you charged 10 per cent to weather-stress, but the pay of the men who put them on the track you charged 90 per cent to weather-stress; is that right and logical as a matter of cost accounting?

A. No, I think in that case the 10 per cent is not sufficient.

Q. You mean you think the 90 per cent weather-stress is too much, do you not?

A. Yes, sir.

Q. You think 10 per cent would be right, don't you? that it ought to follow the renewal of the rails, just the same as the freight and handling of the rails, just the same as the cost to the steel-mill for making the rails should be divided, the cost of the road-gangs who lay the rails down, don't you think so?

A. Yes, sir, that would be more accurate than the 10 per cent.

Q. So in so far as the cost of laying the rails is concerned, the assumption of only 10 per cent for wear and tear and 90 per cent for weather-stress is a mistake and wrong, is it not; it should be just reversed?

A. Yes, sir.

Q. And a reversal of that single item in this account 57 will show that your division (90 per cent weather-stress) of this item is wrong; considering this single item alone, will show that the 90 per cent of the whole account 57 is wrong, will it not?

A. No, sir.

Q. Can you justify that statement?

A. Yes, sir.

Q. Give me the figures to do it, how much was spent?

A. Wait a moment. Now, for the reason,—let me go on—

Q. All right.

A. —for the reason that in this case we are taking the average of the items which are entirely included in these repairs of roadway and track and treating them as the 10 per cent. Here we have an item on which that factor is presumably and reasonably wrong,—

Q. Ought to be reversed?

A. —we have other items in this Repair and Renewal of Roadway and Track which the wear never touches, and it is, (as we have come to before) on the average on the 10 per cent including all items, it is on that basis. In this instance it is undoubtedly wrong. If, on the other hand, all the other items were exactly 10 per cent and this item was out—

Q. The result would be out?

A. —the result would be out.

Q. So in order that the result be right, the other items must be wrong in like degree in the aggregate?

A. Yes.

Q. Now, would the calendar year 1907 (that is, the year ending December 31, 1907,) as to this account 57, (it includes both April and October used by you) be fairly representative of the fiscal year ending June 30, 1907, in your judgment?

A. Well, that I could not say.

Q. Well, let us assume that it would be.

A. Yes, sir.

Mr. O'BRIEN: I don't understand that in this question of operating expenses there was any typical month taken.

Mr. BUTLER: No, I think not.

Recess until 2 P. M.

AFTERNOON SESSION.

Q. I can make more clear the question I had in mind when we adjourned by assuming certain figures. Let us assume, for convenience in computation, that the aggregate of item 57 before you, Repairs of Roadway and Tracks, was $1,000,000; your

division of that would be $900,000 to weather-stress and $100,000, to use; now, let us assume that the labor for the laying of the rails amounts to 15 per cent of the total, which would be $150,000, and that that item should be divided as the cost of new rails is divided, to-wit, 10 per cent for weather-stress and 90 per cent for use; the $150,000 of labor for laying the rails included in this million dollars would then be divided $135,000 to use and $15,000 to weather-stress, and the total division of item 57 would then be $220,000 to use and $780,000 to weather-stress; am I right in that?

A. Yes, sir, that figures out that way.

Q. And assuming all of the items in account 57 other than labor laying rails were correctly divided on the basis of 90 per cent to weather-stress and 10 per cent to use would make the division of the total item then 22 per cent to use and 78 per cent to weather-stress?

A. Yes, sir, on that assumption it would.

Q. Now, in order to form an intelligent opinion as an accountant as to the propriety of the percentages 90 and 10, which you have used for the division between use and weather-stress in this account 57, something of an analysis of the amount and character of the various items going to make up the more than $500,000 included in this account is necessary, is it not?

A. Yes, sir.

Q. Did you make it?

A. No, sir.

Q. Without making such an analysis, the conclusion would be, as to any given period, no more than a mere guess, would it?

A. No, sir, no more than a mere guess, based upon—

Q. Based upon nothing?

A. Based upon the conclusion which I have spoken of, of the Buell case.

Q. Now, on your experience as a railroad accountant and

railroad man, would you not say that the labor cost of laying rails would, on the whole, average more than 15 per cent of the amount included in this account No. 57?

A. That would depend a great deal upon the amount of rails which were laid, of course. In this special instance it would not be 15 per cent of the total.

Q. How do you tell?

A. The amount charged to rails would indicate the laying of about 700 tons of rail, perhaps, and that would necessitate the outlay of, I should judge, in the neighborhood of $40,000.

Q. That is the way you tell?

A. That is, roughly, yes, sir, the way I would go about it.

Q. For the purpose of keeping certain of the statistics involved in this matter, the Northern Pacific makes division on calendar year, does it not, at the end of December 31st of each year?

A. I do not know, sir.

Q. Didn't find out whether they did or not?

A. No, sir.

Q. Is that customary with railroads?

A. To run according to the calendar year?

Q. Yes, as to certain of these operating statistics; not the financial statistics, but the operating cost statistics.

A. I don't know as to that point, sir; the operating statistics, where I have come across them, are frequently kept by months.

Q. As to the maintenance of track and way?

A. Yes, sir.

Q. Is it not usual among all the railroads, especially as to their maintenance statistics, to follow the calendar year?

A. I don't know, sir.

Q. Now, would you have any reason to doubt that this item 57 for the calendar year ending December 31, 1907, was fairly representative of the period covered by your investigations?

You told me this morning you didn't know whether it would be or not.

A. I see no reason why, covering periods of a year, it should not be representative, whether taken as calendar or fiscal.

Q. Mr. Johnson has furnished me a statement that this account 57 for the year ending December 31, 1907,—which includes the two representative months upon which you base your statistics in your Table 5,—discloses a total of $766,324.82, and there was expended for changing of rails $126,020.56, or 16.445 per cent of the total. Now, if that 16.445 per cent of the total were applied to the fiscal year which you have dealt with in your exhibits, then are you not of opinion that your assumption of 90 per cent weather-stress and 10 per cent use is wrong?

A. That would be a question of figuring the other items, which do not contain the full 10 per cent, as I have intimated heretofore, and I would see no particular reason, in view of the very much larger amount which was expended on this total of $766,000, without detailed investigation, to change the percentage.

Q. Enumerate the accounts where 10 per cent of use is too high, in your opinion.

A. Cleaning up the right-of-way, sloping and blasting,—

Q. General cleaning about the stations and right-of-way,—that is one?

A. Yes, sir; cleaning up right-of-way, sloping and blasting, and widening embankments are probably intended to come under that general division of "cleaning up" that you have there.

Q. Well, I want you to enumerate the items in this account where 10 per cent is too much to attribute to the use of the property.

A. There would be, besides the one I have mentioned, the cost of ballast, preparing, delivering and putting same into track, the labor and material used in protecting river banks, keeping track clear in case of freshets and wash-outs.

Q. What item is that under?

A. Under Repairs of Track-J; I am quoting from your division.

Q. All right.

A. And the amounts under K, cost of boarding men at wash-outs, cost of temporary bridges or culverts built to get track over wash-outs. That would be in general the amounts, the heavy ones.

Q. Those are, in general, the items you mean where the amount properly attributable to use is less than 10 per cent?

A. Yes, sir.

Q. Give me the items on which, in your opinion, the amount, properly attributable to use is more than 10 per cent.

A. Distribution of rails and ties, they are the principal ones; and the other expenses, you might say, are not so distinctively marked as to say whether 10 is too much or too little.

Q. Then among the items that you mention where the amount attributable to use is less than 10 per cent was the cost of ballast and the cost of placing the same in the track; am I right?

A. Yes, sir.

Q. And among the items on which you say more than 10 per cent is attributable to use was the distribution of ties as well as rails?

A. Yes, sir; that is very slight, but there is a difference there.

Q. Now, you did not mention the item of laying rails in the category of more than 10 per cent attributable to use?

A. Yes, sir, for the reason that the laying of the rail is the item that enters into this we are discussing now. That is what I meant by the rail.

Q. Then all of the other items would, in your judgment,

fall at 10 per cent, or so near, that there would be no occasion to see which side it fell on?

A. Well, on the general basis, yes, sir, the general division.

Q. That is, as a matter of judgment, you couldn't tell, on which side of the 10 per cent it fell; is that right?—of the other items which you haven't memtioned as either being above or below the 10 per cent attributable to use.

A. Yes.

Q. Do you think that the labor for the distribution of ties should follow the cost of renewal of ties, which would be 90 per cent weather-stress and 10 per cent use?

A. Allow me to correct that: 82½ and 17½. Yes, sir, I think that would be a very fair—

Q. Do you think that cost of distributing the rails along the track should follow the cost of renewing the rails?—which would be 90 per cent use and only 10 per cent weather-stress.

A. Yes, sir, I would consider that a very fair basis.

Q. Now, have you any idea at all, and can any idea be formed by any man, however intelligent, as to how the average of the total of items 57, or any other of the weather-stress items, will come out until you have analyzed the accounts and ascertained the amount spent for each item going into each numbered account?

A. That would be an item which could be more accurately done on that than the basis of assuming 10 per cent.

Q. Well, I am quite sure that I didn't make myself clear. Could any estimate or opinion of value be formed by anyone as to the amount attributable to weather-stress and the amount attributable to use included in account 57, or any other of the numbered weather-stress accounts, without an analysis of the expenditures?

A. Yes, sir, in some of the other weather-stress accounts they could.

Q. Which ones?

A. Your bridges and your ties and your rails generally; but in regard to roadway and track, the matter should be possibly a subject of investigation of the different amounts which go to make up this account in the method you have suggested.

Q. Now, after your division of this item 57, you divided the 10 per cent of it on the basis of your train-gross-weight mileage, attributing to the passenger business only 18.357 per cent; am I right about that?

A. Yes, sir, I believe that is the percentage.

Q. And as to the balance, you divided on the basis of gross earnings, attributing to the passenger business only 24.581 per cent?

A. Yes, sir.

Q. So that if, as a matter of fact, this error with respect to weather-stress effect on the labor of laying rails would have the effect indicated by my assumption or the figures given to me by Mr. Johnson which I have stated, the effect would be, would it not, to divide a larger portion of the sum on the basis of your gross-weight-train mileage, which would lessen the amount finally charged against the passenger business?

A. Yes, sir.

Q. But if the Court or Master hearing this case should be of opinion that Prof. Myers' train-mileage percentage,—that Mr. Peabody's, as evidenced in column No. 2, (train mileage percentage, as the Northern Pacific and the other railroad companies generally used,) was right and that the division of the larger amount, (assuming he held in favor of the weather-stress idea at all,) should be then on the basis of 45.2 per cent to passenger, it would very much increase the amount of expenses attributable to the passenger business, would it not?

A. Yes, sir, it would increase the amount charged to passenger.

Q. So that in each instance where this weather-stress item

is a factor, if the percentage attributable to use be increased and your train-gross-weight mileage (which ignores wholly the question of speed) be used, the passenger cost would be decreased?

A. Yes, sir.

Q. But if the revenue-train mileage (used by everybody else that has been mentioned in this testimony) was used, the passenger cost would be increased as 18.352 per cent is to 45.2 per cent?

A. It would be increased, yes, sir.

Q. In the relation of those percentages?

A. In the relation of those percentages.

Q. As to the amount of all involved?

A. And the amount involved in each percentage, yes, sir; it would show a net increase in passenger expenses.

Q. And, depending,—with respect to this item 57 and other similar items to the one that I am about to mention—where the rails were laid, whether upon a branch or a main line, would, according to your method, make no difference?

A. No, sir.

Q. According to the Northern Pacific's method, however, which applies the train-mile unit divisionally, it would make a very serious difference, would it not? For example, on the branch lines, the train mileages of freight and passenger are practically alike, whereas on the whole they are very different?

A. Yes, sir, it might make a considerable difference there.

Q. And relatively more track-laying per mile of railroad, and all items of maintenance of way and structures are greater on the main line per mile of track than upon the branch lines, because the roadway and structures are better, maintained better, are they not, on the main line than on the branches?

A. Yes, sir, I should think per mile of track the main-line expenses would be heavier.

Q. As to such items does the application of the factor di-

visionally, as the Northern Pacific does it, or on the unit basis, as you do it, decrease or increase the amount charged to the passenger business?

A. On the Northern Pacific basis, which is the use of the revenue-train mileage, I would judge that it would increase the amount chargeable to passenger expense.

Q. To apply it divisionally?

A. To apply it divisionally.

Q. Would it if all the improvements of a particular period involved were on the main line? Wouldn't it have just the reverse effect?

A. If the improvements were all on the main line where the freight-revenue-train mileage is higher than the passenger-train mileage, it would certainly decrease the passenger cost on the Northern Pacific plan.

Q. But if the improvements happened to be for the most part out on a branch, it would have the reverse effect, would it not?

A. Under the Northern Pacific plan, yes, sir.

Q. I mean maintenance instead of improvements.

A. I understood it to mean that.

Q. I meant maintenance. The answer would be the same?

A. I was answering on the idea of maintenance.

Q. Now, suppose that, since this litigation has been pending, the Northern Pacific Company had deeded back to the St. Paul & Duluth company the property which it recently purchased from that company, do you think that that ought to change the division or bases of division of cost between freight and passenger on the rest of the line? wouldn't it simply be right to subtract the earnings of that division and subtract the cost of operating, which would be the Northern Pacific divisional method, whereas your method would change every factor that you have used?

A. Yes, sir, if that had been taken out we would then have

a new unit in the state of Minnesota, earnings, and operating expenses, and train mileage, and so on, which we would use; but—

Q. And the division of every item of cost between freight and passenger on the rest of the line, would, according to your plan, be changed?

A. Yes, sir, the new road as outlined would have a unit.

Q. It would not cost any more, would it, as a practical matter (I am speaking approximately) to conduct the business done by the present Northern Pacific plant, if it did deed back to the St. Paul & Duluth company the property which it recently received from it?

The MASTER: The per cent no higher, you mean?

Mr. BUTLER: Yes.

A. Some small items would be interfered with, but as a general proposition you are correct.

Q. And so if the ownership of the Northern Pacific road was divided into the several divisions which have been mentioned here on your Table 1, the same statement would be true, would it not, practically, substantially?

A. Yes, sir; there would be items of difference, of course, which would accrue on account of the further division of the property into smaller operating units.

Q. Yes, but it would be substantially true as you stated of the St. Paul & Duluth portion?

A. It would approximate that, yes, sir.

Q. Now, if the several companies owning the various divisions were contesting these rates here as the Northern Pacific is, each company then would have a distinct and different basis or unit of division of each one of the common items in the whole cost account, would it not?

A. Yes, sir.

Q. And under the Northern Pacific system all you would have to do would be to eliminate one and go on with the bal-

ance; but under yours you would have to change every unit of division for the rest of the road, would you not?

A. Yes, sir.

Q. The St. Paul & Duluth property is used for the transaction of the business of the Chicago, Milwaukee & St. Paul Company, is it not?

A. Yes, sir, they have a movement there.

Q. And the cost of transacting that business is not affected by the ownership of the road, is it?

A. No, the cost of transacting that business would be the same whether the Northern Pacific or the Great Northern owned the St. Paul & Duluth.

Q. No, you mean whether the Northern Pacific or St. Paul Company owned it?

A. No, sir, I do not mean the St. Paul Company.

Q. Well, I hadn't mentioned the Great Northern; how did you happen to get that in your mind?

A. I took the statement of that business so as not to put the Chicago, Milwaukee & St. Paul in as the owner of that business which was going on, making them still a tenant road in either case as to the change of title.

Q. The cost of transporting the Chicago, Milwaukee & St. Paul business over the Northern Pacific would be the same if the St. Paul Company owned the property, would it not?

The MASTER: Milwaukee & St. Paul?

Mr. BUTLER: Yes, if the St. Paul Company owned it.

Mr. DURMENT: Cost of which company?

Q. The cost of doing the business, they paying for fuel, men and everything?

WITNESS: Yes, sir, that is all right.

Q. Now, if you had before you the St. Paul Company's case and the question of maintaining tracks on the Southern Minnesota, or building a joint depot for freight and passenger business at Austin was before you, you would not, in getting your

units for the division between freight and passenger, take into account the earnings or other statistics of the St. Paul & Duluth property, would you?

A. No, sir.

Q. Why? It is a part of the system, isn't it?

A. For the reason that if I were considering the item of the business subsidiary to Austin, as you speak of, it establishes a factor of measurement for that which is distinctive from the unit which I have been insisting upon of the state business.

Q. Well, but if the Northern Pacific, instead of making this contract with the St. Paul Company had sold the St. Paul & Duluth road to the St. Paul Company and you were trying to divide between freight and passenger the cost of a joint depot or of laying a track or of section men's labor on the branch running across the southern part of the state on the Southern Minnesota, then you would change all your factors, would you not, by the introduction of the elements coming from the operation of the St. Paul & Duluth property?

A. If you are speaking there of the operations of that track and of the division of the repairs, if the St. Paul & Duluth were part of the Milwaukee system in the state of Minnesota, we would include that road in the divisional factor to divide between freight and passenger on this method. Concerning the laying of new track, which I believe is your question, I haven't considered that at all.

Q. Well, you would take into account the earnings for your weather-stress feature, wouldn't you?

A. Yes, sir, but you did not mean new track?

Q. No, no, I mean repairing a track—maintenance item.

A. Yes, sir; I should take the Milwaukee system in its entirety in the state of Minnesota.

Q. Because it would be a part of the unit of that system?

A. Yes, sir.

Q. All right. Now, suppose the Northern Pacific owned

an undivided half interest, and the St. Paul owned an undivided half interest in it, and both used it, would you include the St. Paul & Duluth then as a part of each system in your accounts, so as to keep your units right, or would you divide divisionally, as the Northern Pacific has done?

A. I would apportion my expenses between the two roads as far as the St. Paul & Duluth went and use in each case those factors as being part of the respective system.

Q. I don't quite understand that answer.

A. I meant by that that the joint ownership of the road would require joint operation, impliedly; that joint operation would necessitate the division of expenses between the Northern Pacific and the Chicago, Milwaukee & St. Paul as far as the St. Paul & Duluth road went. We would then use the respective divisions which we have assigned to each road, using it jointly, and treat that division as part of the main line.

Q. Let us assume that the Chicago & Northwestern road has 500 miles in Minnesota, and that the Chicago, St. Paul, Minneapolis & Omaha has 400 miles in Minnesota; and let us assume that the Chicago & Northwestern Company (I don't say it is the fact because I don't know) owns all the capital stock of the Omaha Company, would that fact affect the division between freight and passenger cost upon either road?

A. No, sir.

Q. Suppose the Omaha Company, in consideration of a surrender of its capital stock, should to the Chicago & Northwestern Company all of its property, should that affect the division between freight and passenger cost of either?

A. I should then treat the entire 900 miles as the Chicago & Northwestern system.

Q. Yes; and you would change the basis of division between freight and passenger on every inch of the Northwestern road and on every inch of the Omaha road?

A. It might have that effect, yes, sir.

Q. And might change the whole result, might it not?

A. It would change the whole result to a certain extent, yes, sir.

Q. It would not change the cost of doing the passenger business on the tracks now owned by either, would it, as a fact?

A. No, sir.

Q. Now, let us say that, as to the Omaha road, the passenger rates here in question might be, not excessive, but just reasonable, but as to the Northwestern they would be too low,—in other words, it can win its case here but the Omaha cannot; do you think, if they should make a deed pending the litigation, that then they both should win? That would be the result, would it not, of your method of figuring it?

Mr. DURMENT: I suppose the question is for a lawyer to answer.

Mr. BUTLER: Well, I used the word "win" the lawsuit as—

A. I understand, I think, your method of application. Yes, sir, I should say that I would still hold to the unit rule. As I have explained a unit rule, you come to certain expenses for which you must have a dividing factor and for which you accept a dividing factor in your expenses and the unit of that dividing factor is the road as a whole in the state and not a divisional matter.

Q. How did you treat the Willmar & Sioux Falls—a part of the unit known as the Great Northern, or distinct from it?

A. The Willmar & Sioux Falls had three months of distinct operation in the year under question, I believe; it will be treated as a part of the Great Northern system in toto.

Q. Suppose up here at Hallock, on the Great Northern road, they are building a new depot for freight and passenger use or putting down a new fence—repairing an old fence, if you like—along the right-of-way, do you think that an excursion for passengers at low rates on that part of the road from Duluth

to St. Paul should affect the division between freight and passenger of the cost of the repair and maintenance of a structure or roadbed at Hallock?

A. Yes, sir.

Q. Now, it would not affect the cost of doing the passenger business over the road running through Hallock any more than it would upon the Soo road in the northwest corner of the state, or the Northern Pacific there, would it, as a fact?

A. No, sir.

Q. Now, does the ownership and operation of trackage seem to you to be the exclusive test as to what particular plant shall be considered the unit?

A. Yes, sir, I think that the roads in the state of Minnesota, lines owned and operated, should be the unit of the test.

Q. The rates in question make no distinction between roads; by their terms they apply, or purport to, equally to all; why should not the whole traffic of railroads within the state of Minnesota, without regard to ownership, be considered the unit?

A. I should judge that when it came to a final determination of this question,—

Q. I mean as an accounting matter.

Mr. O'BRIEN: Well, I suppose an accounting matter means an intelligent—

Mr. BUTLER: Certainly.

Mr. O'BRIEN: Then he should be allowed to answer.

Mr. BUTLER: I thought he misunderstood me. I didn't mean to interrupt Mr. Hillman at all.

A. (Continuing). I should judge that when the matter came to a final test of the rates within the state of Minnesota, the matter of considering the railroad situation as a unit in the state would be taken under consideration.

Q. You think it ought to be so considered in an accounting matter to expose the truth with respect to these costs as com-

pared with revenue, do you not?

A. They should, yes, sir.

Q. And every common item should be divided on the basis of units derived from all the railroad traffic in the state? As between freight and passenger, I mean, of course.

Mr. DURMENT: That is, you mean every common item on each particular road should be divided by a unit, established upon a consideration of the business of all the roads in the state, is that it?

Mr. BUTLER: I think my question is fairly clear Bro. Durment.

Mr. DURMENT: I submit that it is not, to my mind. I want information, that is all.

A. I should consider in this matter that the unit of the road within the state was a sufficient determination as to the reasonableness of the rate in question.

The MASTER: That is, each company and the road it operates, is the unit under consideration, under all circumstances?

Q. Is that the way you desire to be understood, Mr. Hillman?

The MASTER: That is, within the state?

WITNESS: Yes, sir, I should think that that was the proper unit of division. I would say, though, it has occurred to me—

Q. That the whole state ought to be taken?

A. It has occurred to me (and I think I have spoken of it) on the determination of these factors on their distinctive operating bases of the road units, that a consolidated statement of the business in the state, made up on the basis of these units, would be a desirable thing.

Q. For what purpose?

A. For a purpose of determining the reasonableness of the rate within the state,—which purpose is beyond my province, sir.

Q. Yes, I know you have not been employed to do that, but

I now mean as a strict accounting matter in order to determine the reasonableness of the rates, certain of these divisions between freight and passenger, as I understood your last answer, should, in your opinion, be divided upon a unit derived from those consolidated statistics of all the roads located within the boundaries of the state?

A. No, sir. Understand me, that I do not mean that I would reconsolidate all the operating statistics of the different units, producing an entire result as if the state had been a unit and all the roads contained therein—

Q. No, I didn't so understand you.

A. But I mean that the divisions which I have made of freight and passenger, per road unit per state, could be consolidated into a condensed statement, and then on that basis determine the freight and passenger. I would not re-assign freight and passenger on the total of state basis, but I would take my assignments to freight and passenger and apply them to the total business in the state.

Q. Well, how about the division between state and interstate,—consolidate that, too?

A. I would apply that in the same way, but not redividing the whole matter; I would take the roads as units, and the determination of the freight and passenger as units, and the inter and the intra as units, and then make my consolidated statement,—not, you understand, redividing and making a statement eliminating all the divisions that I have heretofore made and then making a question on consolidated statistics.

Q. But when you come to divide between freight and passenger, that division, in your opinion, must be made on the basis of the statistics of the road as a whole, and not upon the basis of the trains using the instrumentality involved; do I understand that right? Here is an instrumentality located anywhere on the Northern Pacific road, used just as much for the passenger business as it is for the freight business, and that is demon-

strable by ready observation; should not that item be divided equally between the two to expose the truth as to the cost of each class of business?

A. If you demonstrate that fact, it would, of course,—

Q. Yes, sir.

A. It should be.

Q. So the cost of a snow-fence which you divided on the train-mileage basis on a certain division of the road, should be divided between freight and passenger on the basis of the number of trains that used the road protected by the snow-fence, should it not?

A. No, sir, I decline to come from treating the state and all the operating expenses as a unit, and still hold that that is the proper basis,—the state as a unit.

Q. You divide a portion of the cattle-guards and whistling-posts on the basis of use, do you not?

A. Yes, sir.

Q. Now, should the renewal or repair of a cattle-guard in a track which is used just as much by one kind of trains as by the other, that portion of it which you say should be divided on the basis of use (the wear and tear portion), should that not be divided in two, if you want to get at the truth of division?

A. The account of which you speak includes the repairs, you must remember, of your crossings (your road crossings) as well as your cattle-guards.

Q. Yes.

A. And it is on the road crossing where the train wear comes in and which distinguishes it from the fencing which we have spoken of.

Q. Let us take the highway crossing on a branch of the Northern Pacific, and that branch has just as many wheels passing it for the passenger business as it has for the freight business; let us assume that to be the fact; should not that item be divided evenly between the two, without regard to the vol-

ume of the business or the wheelage on the road as a whole or on some other part of the road where the instrumentality in question is not involved in any way?

A. You come back again there to the segregation of the expenses of the road of all characters to divisions and to locating them by the division, disregarding the fact that in the method of the unit you are assuming the averages. On the doctrine of averages, which is an accepted factor in all relations, those matters would even themselves up. I might illustrate that, perhaps, by the supposition that we were providing funeral or grave accommodations for the entire male population of Minnesota, the average height being possible five feet seven and one-half inches; if I would order 400,000 coffins with the five seven and one-half inches plus the small amount necessary to accommodate that man, I would have a number of misfits, undoubtedly. If, however, I would provide on the average enough of them, the total lineal feet of my coffins would be the same whether I used the average five feet seven and one-half inches or five feet eleven in one case and five feet four in the other. That illustrates my meaning by stating that I can use the average in the state of Minnesota without interfering with the ultimate result, though the application of details as we go along would seem to indicate that I was misfitting the case.

Q. The Northern Pacific has allocated to divisions these items of maintenance, has it not?

A. Yes, sir.

Q. And also to divisions the earnings on the divisions, has it not?

A. I don't know whether they have allocated the earnings to divisions or not.

Q. You didn't find out about that?

A. I don't remember at all in that regard.

Q. Now, if they put down a new track on a branch in the northwest corner of the state, renew the rails and ties, and the

use of that track, as far as wear and tear is concerned, is exactly the same between freight and passenger, you hold, as I understand you, that it would not be right or just to divide that item equally between freight and passenger?

A. Not unless every other item in the state was taken and divided on the same basis.

Q. Well, I mean on the divisional basis.

A. On the divisional basis, yes, sir.

Q. Well, if every other item is divided on the divisional basis, it would be right, would it not, and would get the best result—better than an average?

A. I can't see where it would make any material difference.

Q. Well, it would be just as good; it would be right, wouldn't it, logically, arithmetically and every other way?

A. Oh, it would be all right, yes, sir.

Q. It is right?

A. Yes, sir.

Q. Now, you are putting it all into the pot and considering it a unit?

A. Yes, sir.

Q. The effect upon the division of the cost of renewing ties and rails in the northwestern corner of the state by the application of your method would make a change of rates, either of freight or passenger, between St. Paul and Duluth, affect the question, would it not?

A. No, sir, it would not.

Q. You divide a large portion of it on the basis of earnings, do you not?

A. Yes, sir.

Q. Now, we will assume that one year the earnings by reasons of existing rates between St. Paul and Duluth were one thing, the expense for the maintenance of the track upon the branch was another, and the next year they cut the rates in two, and the maintenance was less on the freight business

and remained the same on the passenger business, it would change, the division, wouldn't it?

A. Yes, sir.

Q. So under your method, a change of rates on a part of the road not involved in the expenditure for the item of maintenance of way and structures, would change the division between freight and passenger, according to your statistics?

A. According to my method, yes, sir.

Q. But you know do you not, that it would not change the cost, the amount of money they would have to pay to do the business?

A. No, the total expense would remain the same. As I explained,—

Q. And the total cost of the passenger business would remain the same, no matter what was done with the rates on some other part of the line; isn't that true?

A. No, sir, there is where you misstate in this division. You must remember that we have conceded, and I do concede always, that there are certain common expenses which must necessarily be divided upon some factor which bears directly upon it. They are not all directly assignable to freight or to passenger (all expenses) on the basis of the fact that the profit or what we get out of a utility is a proper basis for the division of such common items; we did divide certain expenses and assign them one year to passenger; the next year we have for those common items a gross earning which varies from the year before; we will suppose that the operating expenses had remained exactly the same for each of the years; on that basis (which I consider a proper one) the division then to passenger for the second year would not be so great as the division for the prior year, and we would have a less passenger expense and a greater freight expense.

Q. According to the division?

A. According to the division, yes, sir.

Q. But would you in fact?

A. That is what I am trying to get at.

Q. I know what the arithmetical effect would be, of course, but I am trying to see if the arithmetical effect fits the fact. Now, my question was this: does the change of rates between St. Paul and Duluth affect the cost of the passenger business as respects its share of the maintenance of way and structures on that branch of the road going from Winnipeg Junction north out of the state, *as a fact*. Not according to a method of division, but I mean as a fact.

A. No, sir.

Q. But your method of division makes the change of rates or the volume of traffic, or the amount of engines, or personal injury accidents between St. Paul and Duluth, affect the passenger cost from Winnipeg Junction north to Canada, does it not?

A. Not on the items you happen to have mentioned, but it does on some items.

Q. Yes, on some items of cost?

A. Yes, sir.

Q. And in so far as it does, it is out of harmony with the truth and with the facts, is it not?

A. I hardly consider it so, Mr. Butler. It seems pretty hard for me to make my meaning clear on that point.

Q. Now, let me see if I am not perfectly—

The MASTER: Don't interrupt Mr. Hillman if he hasn't finished.

WITNESS: As I have stated, the items which are common and cannot be directly assigned to freight or passenger are under the method of cost accounting which are divisible upon the gross earnings from that utility. When you have made that division in the prior year you have used that gross earning for those common expenses as the reasonable factor for their division. That does not state that they were absolutely in-

curred in that proportion—which is the point you wish to make —but it is reasonable to assign those common expenses on that basis. If, in the next year, you reduce either of those items, you then will be compelled to reduce those common items to that factor of (you might say) the product of their utility; you will not, however, change the actual factor of the cost of freight and passenger, could that absolutely be determined, for those common items.

Q. Now let me see if I understand all that (and I am trying to do my best to); take the cost of maintenance of the Winnipeg Junction branch (we will call it) which lies in Minnesota; under your method a change in the rates on another part of the line, or a change in the volume of the business upon another part of the line or upon the whole of it, would change the division between freight and passenger of the maintenance items on this branch, would it not?

A. It would change it upon the entire line in the state of Minnesota.

Q. And including that branch?

A. Including that branch, yes, sir.

Q. Now, you agree with me that a change of the freight rate or of the volume or kind of freight moved on another part of the line than this branch would not affect the passenger cost on that branch, do you not?

A. The absolute passenger cost, no, sir, it would not.

Q. But under your method of division it would affect the amount that you charge to the passenger cost?

A. Yes, sir.

Q. So your passenger cost, as you did build it up, then, would be inaccurate to whatever extent the variation is from the absolute, would it not?

A. Yes, sir.

Q. Which proves does it not, that your method of division is not an accurate method of division; and you take earnings

because it is the best you can get, the earnings of the whole road, because you think it is the best you can get? That follows, does it not, from your answers already given?

A. Yes, sir; that the only basis that you have for the division of those expenses which cannot be accurately determined, their only measure and their only reasonable measure is a general basis which might be varied by a change in rates or in volume of traffic.

Q. Now, if you had the earnings on the branch, freight and passenger, where the item of maintenance was expended, would the earnings derived in part from the use of the instrumentality involved be as good or better or a worse factor than the earnings derived from the use of instrumentalities not involved in the expenditure,—and, you might say, for the purpose of the point, for the transportation of the business of the St. Paul Company over the lines from St. Paul to Duluth?

A. I think it would be a worse factor—

Q. Why?

A. —as regards these items of expenses which are incurred under the basis which we have been discussing, for the fact that the renewal of these items (I mean repairs and renewals) would depend quite largely upon whether the road was in a position to afford it,—not whether the division was, but whether the road was in a position to afford it—and that therefore these renewals would be more thorough and keep pace more to keeping the track to what you might call its normal or proper condition than it would if considered as a division by itself.

Q. Does not your last answer make the amount of money in the treasury or available for use by the company, or its disposition to make expenditures for maintenance, a factor in dividing what has been spent for maintenance between freight and passenger cost?

A. Yes, sir, the use of the gross-earning basis does, the

supposition being, of course, they will do what is right to keep up as close as they can.

Q. Is that logical, in your opinion?

A. Yes, sir, for the gross-earning basis is a logical basis for division. I recognize, fully, Mr. Butler, the objections you make to it, having considered them pretty thoroughly and have thought over them a great deal and recognize their force absolutely.

Q. And you think that when the question as to the relative justness between passenger rates and freight rates is up for judicial determination, the making of the cost attributable to each class of business depends upon the earnings derived from the rates in question is logical, do you?

A. Yes, sir.

Q. Do you not think that the quantity of use of the branch from Winnipeg Junction north by freight trains and by passenger trains would furnish a better basis for division of the cost of maintenance than some method based in whole or in part upon the rates or revenue on the whole system?

A. No, sir, I think we should, as I have said, treat this matter as a unit as far as possible.

Q. Then why didn't you divide the whole item on some revenue basis instead of attributing some of it to use and some of it to weather-stress and dividing that on use on the basis of the use of the two kinds of business and that on weather-stress on the basis of earnings?

A. For the very reason that we consider part of it is the wear and part of it is the stress.

Q. Well, do you think that the basis of use as to the part applied to is better than a revenue basis would be,—more logical?

A. For the basis of wear, yes, sir.

Q. But when the weather-stress is a factor, you think that you have to divide on the basis of revenue?

A. That is the only factor for that item, sir,—not the only factor, but what I consider the best factor for that item.

Q. Item 66 is entitled Maintenance of Leased Lines, and item 9 is entitled Proportion of Operating Expenses of Terminals. In both those cases you accepted the Company's allocations, did you not?

A. Yes, sir.

Q. And they did not consider the state as the unit and make the division of the various items involved on the basis that you have other items?

A. I think not, sir.

Q. So then, your method has not been consistently followed, even by yourself, in making up this exhibit?

A. No, sir, this proportion of operating expenses of terminals is a proportion which comes directly from the use of the terminal in question and being a matter of lease, as you might say.

Q. But it includes maintenance, does it not?

A. It includes maintenance, but being a matter of lease, as you might say, in the proportion of the operating expenses of terminals, and in the matter of this item 66, maintenance of leased lines, I accepted their allocation of it as being covered by the terms of the lease under which they used the terminal or used the leased line. That was the reason for that.

Q. The lease didn't have anything to say as to the division between freight and passenger, did it?

A. Yes, the divisions there would be indicated in their lease, as to what—

Q. Of revenue in but not of amounts paid out, would it?

A. Yes, sir, I should judge in those matters that they would have to pay perhaps on one account on a wheelage basis.

Q. Which one was that?

A. I suppose with the St. Paul Union depot. I should judge their in-and-out there would be on a wheelage basis.

Q. Did you look that up?

A. I did not, no, sir.

Q. Well, is there any freight there involved?

A. No, sir.

Q. That involves maintenance of track, does it not?

A. The bill which the company renders them, yes, sir, involves maintenance of track.

Q. Then why should not some of that be charged to the freight business, just the same as the Mississippi street yards?

A. Well, just for the reason which I stated, that it is the rental of a passenger facility.

Q. Then the rental of a passenger facility, which rental would cover maintenance, ought to be treated differently than the amount of maintenance of a passenger facility owned by the company?

A. Yes, sir.

Q. If the facility is owned by the company, the amount of the maintenance of the passenger facility should be divided between freight and passenger, but if it does not own it, the amount that is included in its lease for maintenance should not be divided; that is a fair statement of your testimony, is it not?

A. Yes, sir that would be covered by my statement this morning in response to your first question, where we are unable, in drawing out from the general mass of expense the exact maintenance of that yard, to ascertain by the completion of those operating items, mileage and trackage, etc., the factor which we are compelled to use for the state.

Q. Does not the St. Paul Union Depot Company bill the Northern Pacific Company direct for its maintenance of the trackage in the St. Paul Union Depot showing that item also?

A. Yes, sir, I think that is the fact; I recollect that the old bills show it.

Q. And its vouchers show, do they not, the amount ex-

pended, or certain of the amounts expended, for maintenance of its exclusive passenger yards at Duluth that it owns?

A. That the Northern Pacific owns?

Q. Yes.

A. I think so, yes.

Q. And you treat them differently?

A. Yes.

Q. And you hold that it is logical to charge up to the freight business a part of the Duluth maintenance, where it happens to own the stations, but to charge to the passenger business all of the St. Paul Union Depot maintenance items?

A. Yes, sir.

Q. Isn't that because you can't do any better or your system breaks down, or something like that? It certainly doesn't seem to me that you mean that that is arithmetical or logical or rationally sound.

A. I think the distinction there of the rental of those items for the exact purpose is sufficient and I have so taken it.

Q. Well, it is not a rental at all, is it?

A. Practically, yes, sir.

Q. Well, now, is it practically?

A. Yes, sir.

Q. Doesn't it bill the Northern Pacific direct for each of the items of maintenance?

A. Yes, I believe so.

Q. And that is shown by itself?

A. Yes, sir.

Q. And charged to passenger business?

A. Yes, sir.

Q. But in the Duluth yard, where it pays money, it is charged about two-thirds to the freight business and about one-third to the passenger business?

A. I don't remember the proportions.

Q. Well, that would be about your proportions?

A. Yes, sir.

Q. Look at item No. 60. I think what I desired to ask about this item has been substantially covered in what we went over this morning, but to make it clear and in connection —you hold, as I understand you, that the weather-stress and wear and tear items are the same, without regard to the character of the bridges and culverts?

A. Yes, sir, I have held that the weather-stress items hold the same relative proportion to one another,—not that a steel bridge would not last longer than a wooden bridge, but—

Q. And you divided 85 per cent for weather-stress and 15 per cent for wear and tear?

A. Yes, sir.

Q. Divided 85 per cent on the basis of rates and revenue and 15 per cent on the basis of use as you made it up here in this gross-train-weight mileage?

A. Yes, sir.

Q. And if the Court would eliminate the weather-stress factor in making its decision and follow Prof. Myers in making this division, it would come out exactly the same as the Northern Pacific does, would it not?

A. Yes, sir, with the exception of the Minnesota unit as to the other, which is very close to it.

Q. And if he followed Mr. Peabody, he would come out exactly the same, wouldn't he?

A. You mean Peabody 1?

Q. Well, that is the only one Peabody ever used in bookkeeping, as I understand it—or anyone else, as far as the evidence shows; and that is what I mean by the Peabody method.

The MASTER: Well, call it Peabody 1.

A. Why, calling it Peabody 1, we can eliminate, if you desire, Peabody from the heading and use it as the train-mileage basis, Minnesota unit, switching excluded, revenue-

train mileage, Minnesota unit and eliminate it here. It is the application of Mr. Peabody's analyses, with the understanding in each case that one is a revenue-train mileage without switching and the other a revenue-train mileage with switching.

Q. Peabody No. 1, then?

A. Peabody No. 1, yes, sir.

Q. And if any basis ever heard of was used except yours, it would come out practically where the Northern Pacific does eliminating the weather-stress feature?

A. And using the revenue-train mileage, yes, sir.

Q. Well, everybody that you ever heard of uses that?

A. No, sir; the Peabody method does not use it now, or at least is—

Q. Well, eliminating that..

A. Eliminating that;—and the M. & St. L. do not use it.

Q. Look at item 61, cattle-guards, road crossings and track signs. You have divided there between weather-stress and wear and tear 25 per cent to wear and tear and 75 per cent to weather-stress, as I have it.

A. I believe that item is probably correct.

Q. That includes the renewals and repairs of street railway road crossings, including bridges over roads and roads under tracks, gates at crossings, signs, including highway crossing signs, mile posts, whistling-posts, location of signs for water stations and for stations; also cost of cattle-guards crossing drains, hedges, repairs of sewers assessed against the property, but exclusive of crossings within the limits of stations and shop grounds; also tools used in making up of such repairs; is that right?

A. Yes, sir, I believe that is right.

Q. And the use-item of these things that I have mentioned is about two and one-half times as much as of the ties and track?

A. Yes, sir.

Q. You divide between use and weather differently when

you are considering a bridge in the track and a bridge over the track upon which the public travel or under which the public travel, but if the bridge crosses a stream it is divided on one basis; if it crosses a highway, as I understand it, and the people drive under it, it is divided on another?

A. No, sir, you are mistaken there. The bridges over are the bridges which carry outside taffic, such as wheel-carts, and those over the tracks and the roads under are the roads which run under; it does not include the trackage over this road. As you understand, that would be a bridge and would be in the bridges where you would come, but the street underneath it or where there is a viaduct over the track, would come under that account.

Q. Well, I read the text of the Northern Pacific's instructions or memorandum, whatever it may be called, for this matter, as follows: "This account includes the renewals and repairs of street railroad crossings—

A. Street railway and road crossings.

Q. —"including bridges over and roads under tracks, gates at crossings, etc."

A. Yes, sir.

Q. Now, as I understand the meaning of this " road under tracks," it is perhaps where the track is on a fill, the fill is cut and a highway or street goes under the rails of the track.

A. Yes, sir.

Q. You so understand it?

A. Yes, sir; but it does not include the bridge over that track when it is depressed.

Q. What does it include?

A. It includes where the track is carried over the track on a bridge; I mean where the highway is carried over the railroad track on a bridge; and it includes the cut below the track on the bridge, but it does not include the bridge which carries the railroad track.

Q. It says "including bridges over and roads under tracks."

A. Yes, sir, the bridge over the track and a road under the track, but not the track over the road.

Q. Well, does it maintain the road under the track?

A. Yes, sir.

Q. Is that the custom?

A. Yes, sir.

Q. Did you analyze that to see?

A. Yes, sir; it is the custom, I know, with the roads that I have been operating on; we do that very decidedly where we had to maintain the streets under our elevated railway structure. I suppose there are some charges where they are compelled to do the same.

Q. And your idea is that the use on a highway bridge, then, is two and one-half times as much in its life as it is in a railroad bridge?

A. No, sir. The principal reason for putting that in here was this, that, if you will notice there, there are cattle-guards, road-crossings and track-signs; there are a large number of grade railroad crossings throughout Minnesota; each one of those has planking in order to prevent the trouble with wheels. Now, with planking and the large source of expense there, is the wear of that plank by the tread of the wheel and the flange of the wheel on those protecting planks and it amounts to a large proportion, and it was on the basis of that wear that I increased from 10 to 25.

Adjourned until Friday morning, July 9th.

FEDERAL BUILDING, St. Paul, Minn., July 9, 1909, the hearing was resumed at 10 A. M.

CONWAY W. HILLMAN,
recalled for further cross-examination, testified:

By Mr. BUTLER:

Q. Referring to account 61, cattle-guards, road-crossings and track-signs,—

A. Just a moment, Mr. Butler, if you please. I don't know whether this is the proper point or not, but I wish to correct a statement that I made yesterday where I was in error. Is this the point to do so?

Q. Any time is a good time, I think.

A. I stated in my testimony yesterday that my recollection of the Buell case was that they used a revenue-train mileage. I find, on page 106 of the Buell case, the following: "For these reasons it was concluded that the cost of the maintenance of way which depends upon the traffic should be apportioned between freight and passenger on the basis of the revenue-train mileage, including switching mileage, on some basis in the freight-train mileage."

Q. When you made the Prof. Myers division on your Table 4, what percentages did you use?

A. I used the switching included, sir.

Q. What percentages did you use?

A. I don't know, sir.

Q. Can you find out?

A. Yes, sir.

Q. Now?

A. No, sir; I could not tell that without looking up my figures and refiguring it.

Q. Well, didn't you figure train mileage including switching?

A. Yes, sir.

Q. What was the percentage?

A. That would be the same percentage that I used in my own case.

Q. You don't mean that, do you? The percentages you used in your own case were based upon train weight, and was 18.352 attributable to the passenger business.

A. I mean by that that the use of it here was according to the percentages which I had used, switching included, not necessarily the percentages which I had used in that division there.

Q. Well, what was the train-mileage-switching-included percentage?—you made up this division according to Prof. Myers which you include in your average?

A. I know I did, but I believe I gave you those percentages, did I not?

Q. No, there is no revenue-train mileage including switching given us; there was engine mileage including switching.

A. Well, that would be the basis, engine-mileage including ing switching.

Q. No, that isn't the same. For the switch-engine mileage it is 30.7 per cent of the total engine mileage, and 32 and a fraction per cent of the train mileage plus switch-engine mileage; engine mileage and train mileage not being the same, even if switch-engine mileage be omitted, because as your tables show, there are a lot of engines running over the road not pulling any trains, a lot of pushers and helpers that are not switch-engines and do not make any train mileage.

A. I would have to make that apportionment to tell you that percentage, sir, which I will do and report this afternoon.

Q. Can you get that from the original figures that you used to make up the so-called Myers' division on your Table 4; not one to be computed now, but the one that you did use to make up the Myers division?

A. I think it is probable that all those working papers are preserved and that I could find them, sir, and report to you, which I shall be very glad to do.

Q. Do you remember on what basis you introduced the element of switch-engine mileage attributable to freight to the revenue-train mileage? Mr. Myers, in that part of the opinion which you have read, says that he wrote it on some basis?

A. Yes, sir.

Q. Now, on what basis? Did you find out what basis Mr. Myers used?

A. No, sir.

Q. Then how can you say that the double-column which purports to be on the Myers' basis is on the Myers' basis unless you found out what basis he divided the switch-engine mileage between freight and passenger?

A. Having his status including switching engine mileage on some basis, I should then deem that I was justified in taking the portion of the switching mileage which I had assigned to passenger from the freight mileage and using the balance as the freight mileage.

Q. And call that Myers' method?

A. Yes, sir.

Q. That is to say, when Mr. Myers says that he divided the switch-engine mileage on some basis between freight and passenger and added to the train mileage of the various kinds, then you think that if you would divide it on a basis that occurred to you as right and add it and make a division, you would also be justified in labeling that division and representing it here to be the basis of division that Prof. Myers made, and then make an average of it so as to show that you came out near the average,—make an average of the last four on your table except 7?

A. I think I am perfectly justifiable in using that mileage,

taking that percentage off the total switching mileage, and have used it. What percentage Mr. Myers would have used in this Buell case I could not say. However, on page 90 he states that, "As has already been said, switching expenses are practically all a freight expense, and should, therefore, be included in the cost of the freight traffic."

Q. Did you have anything to go by in making up your so-called Myers double-column on Table 4 except the opinion which has been handed to the Master in this case?

A. Yes, sir, there is one item which I had other data on.

Q. What item?

A. The item of the weather-stress on ties.

Q. That is not disclosed in the opinion?

A. In the Buell case?

Q. Yes.

A. No, sir.

Q. And you talked with Prof. Myers about it?

A. Yes, sir.

Q. And got the percentage that he thought he used in making the division?

A. Yes, sir.

Q. Is that the only point?

A. Yes, sir, I believe that is all.

Q. Can an accountant take that opinion in the Buell case and find a rule for making a division of each of the items of cost between the freight and passenger except the weather-stress feature on ties which you had a conversation with Prof. Myers about?

A. There are a number of items there which he discusses generally, and—

Q. Doesn't say what he did?

A. —doesn't say what he did; where he has accepted the company's distribution of the items, giving his reasons for that.

Q. And he doesn't state what the company's rule was, with accuracy, does he?

A. I believe he does.

Q. In each instance?

A. I could not say whether in each instance or not, sir.

Q. You can't say, can you, and will not say, that the opinion in the Buell case contains in it rules for division of each of the items and each of the elements in each of the items of cost between freight and passenger?

A. No, sir, it does not.

Q. It does not?

A. No, sir, not for each of them.

Q. It is true, is it not, that it would be impossible, with this opinion alone for a guide, to make a division?

A. I have noticed in some cases it would be impossible to do so.

Q. And in those cases, in making your computation which you have credited on Table 4 to Prof. Myers, you used your own judgment as to what ought to be done, as you did in the switch-engine mileage matter?

A. Yes, sir, mainly consisting of allocated items by the Railroad Company.

Q. So that that portion of Table 4 labeled "Myers" is a blend between Mr. Myers' method as evidenced in the Buell decision, the Northern Pacific method, which you adopted in part, and also matters of your own judgment where the statements as to details of division were so indefinite in the opinion as not to be capable of being followed?

A. Yes, sir.

Q. And Hillman No. 1 is your own, exclusively?

A. Yes, sir.

Q. Hillman No. 2 is your own, exclusively?

A. Yes, sir.

Q. So you were a factor in three out of the four that you

averaged, the exclusive author of two, partly the author of the third?

A. You can hardly call it being author of the third.

Q. In part, I say, in so far as it is blended.

A. Yes, sir, there are certain items where I had information directly which bore on the case which I have used.

Q. And as to the fourth you relied on this conversation that you narrated with Mr. Peabody, but never knew it to be concretely divided by anybody on the Peabody method?

A. No, sir, I do not know whether he used that on the Atchison or not, or that it is according to his interpretation of his train mileage, switching included.

Q. Did you ever know anybody, as a matter of accounting, to add the engine mileage to the train mileage to make a percentage? Isn't engine mileage to be added to engine mileage, road-engine mileage to switch-engine mileage, and isn't that the way to do it instead of adding engine mileage to revenue-train mileage?

A. Yes, the revenue-engine mileage should, of course, be added to the revenue-switching-engine mileage, as you find that the revenue-engine mileage is practically the same as the revenue-train mileage, it differs very slightly. I have used that right through and considered that we could add to the revenue-train mileage the revenue-switching-engine mileage, considering it as the movement of the switching train.

Q. Is there a non-revenue-switching mileage?

A. No, sir. Well, yes, sir, switching mileage; switch-engines are used for—

Q. You spoke of revenue-switch-engine mileage and switching-engine mileage; are there two kinds, revenue and non-revenue?

A. It is a mistake to say revenue-switch-engine mileage in this instance.

Q. Give the total train mileage and the total road-engine mileage and the total switch-engine mileage in Minnesota. You have them all on your table.

A. In my train mileage I have not put the Minnesota total in on this table, and I will have to add it up for you. The passenger-engine mileage, including one-fourth of the mixed trains, amounts to 1,956,316 miles; for the passenger-train mileage, engines,—

Q. What is that? the passenger engine miles?

A. The passenger-train engine miles amount to 1,956,316 miles.

Q. Passenger-train miles?

A. The passenger miles amount to 1,956,259.

Mr. O'BRIEN: Passenger-engine mileage how much?

WITNESS: 1,956,316.

Mr. O'BRIEN: And passenger train?

WITNESS: 1,956,259.

Q. How did the difference arise?

A. I do not know, sir.

Q. Do you include pushers for passenger trains?

A. No, sir; that is just the direct train mileage of the engines.

Q. Well, add the mileage of the passenger pushers or helpers, whatever you call them, to it, if there is any; it is not switching.

A. That adds 21,077 engine miles to the total I have mentioned, and makes it passenger-engine miles 1,977,393.

Q. What excess over the passenger-revenue train miles?

A. 21,077 engine miles.

Q. Can you give us the same as to freight, including the engine miles other than switching, to be compared with the revenue-freight-train miles?

A. The freight-engine mileage for the state of Minnesota amounts to 3,199,448 engine miles.

Q. That excludes the switch-engine mileage?

A. Excluding switching, yes, sir.

Q. Excludes the work-engine mileage?

A. Yes, sir, excludes work-engine mileage.

Q. And snow-and-ice engine mileage?

A. Yes, sir, excludes snow-and-ice engine mileage.

The MASTER: Is that engine-train freight mileage?

WITNESS: These are the freight-engine miles made by the freight engines which belong regularly to the trains, and the engines running with cabooses, three-fourths of the mixed, the helpers in doubling hills, making up the entire freight-engine mileage.

Mr. O'BRIEN: That includes the helpers, then?

WITNESS: Yes, sir.

Mr. O'BRIEN: Can you give how much those helpers amount to?

Mr. BUTLER: I think they are on that table.

WITNESS: Yes, sir, the last line on the first division of Table No. 3, marked "Minnesota Total" gives the figures which I have added together to make the 3,199,448 engine miles freight.

Q. Now give me the freight revenue-train miles.

A. 2,613,923.

Q. We made it 2,615,179, but we will assume your figures are correct; and then I will ask you to give me the excess of the train-engine mileage over the train mileage in the freight department.

A. 585,525.

Q. Now, add to that the excess in the passenger side of the road-engine passenger miles over the revenue-train passenger miles.

A. Adding the passenger excess of 21,077 engine miles gives a total of 606,602 engine miles.

Q. You were not accurate, then, when you said that ex-

[redacted]

A. [redacted]

Q. [redacted]

A. [redacted]

Q. [redacted]

A. [redacted]

Q. [redacted]

A. [redacted]

Q. [redacted]

A. [redacted]

Q. [redacted]

A. [redacted]

Q. [redacted]

A. [redacted]

Q. [redacted]

A. [redacted]

Q. [redacted]

A. [redacted]

Q. [redacted]

A. [redacted]

Q. [redacted]

A. [redacted]

amount, the passenger proportion is 37 per cent."

Q. And the figure he uses in his table is 36.44?

A. (Continuing). "When the switching mileage is entirely excluded, the passenger proportion is about 41 per cent." You will note in that that he has, just prior to this, discussed the effect of switching mileage, and he states that mileage may be considered as having an effect on the track of either the full amount of the switching mileage or of only one-half of the switching mileage, but, in either event, whether he uses the full amount of the switching mileage or one-half of the switching mileage, he uses it as a freight proposition, pure and simple, and does not include any of it in the passenger business.

Q. But you included 95 per cent of it in the freight business in making your division according to Myers?

A. Yes, sir.

Q. And labeled it "Myers"?

A. Yes, sir.

Q. Can you find any justification for that in anything you have ever found in that opinion or for charging to the freight business any more than one-half of the switching-engine mileage?

A. Yes, sir.

Q. All right.

A. Page 105, Buell decision, "The revenue train mileage, however, is not the only mileage that should be considered. The switching mileage is of almost equal importance. Switching trains are not always as heavy as revenue-freight trains, but they stop and start and consequently slip more frequently than any other class of trains; and this causes more damage to the track than anything else connected with train movement. A switching-train mile is probably as injurious to the track as a revenue-freight-train mile."

Q. Is that your justification for charging to the freight business 95 per cent?

A. No, sir, but for taking the switch-mileage as of equal value as the freight-mileage. That I took 95 per cent of it is based upon the proportion of that switching mileage which I had determined was due to passenger.

Q. Coming back to the proposition of your justification for labeling this division "Myers" on Table 4, can you find in that opinion any word or syllable which will justify you in charging to the freight business 95 per cent of the switch-engine mileage?

A. No, sir, I should charge 100 per cent to freight mileage according to his basis.

Q. Well, did he not either ignore it altogether or charge one-half to freight in the only divisions he made?

A. No, sir, in this table which he mentions here, and which you have mentioned on page 107, you will note that he gives the passenger proportion as 31.76 per cent including switching in freight for the full amount, and passenger proportion 36.44 switching in freight for one-half the amount.

Q. And in the statement that you last read the Commission's apportionment of the item involved on the 36.44 per cent basis was $90,663.86, and on the next page of the opinion the final findings of the Commission increased that amount to $92,478.21, did it not, and those are the only two expressions by figures of the views of the Commission upon the subject, are they not?

A. He assumed on this second page (page 108)—he took the company's apportionment of that instead of either of his own and accepted the $92,487.21.

Q. And that was the final finding of the Commission, was it not?

A. Yes, sir.

Q. Which was an increase of passenger expense over and

above what it was attributing one-half of the switching to freight?

A. Yes, sir.

Q. So that, in so far as you have used 95 per cent of the switch-engine mileage as an element and a factor for division between freight and passenger and charged it to freight in making the so-called Myers statement on your Table 4, it was wholly without justification and a pure addition to that opinion, was it not, and does not represent any view that Prof. Myers ever expressed in that opinion?

Mr. O'BRIEN: Isn't that a matter of argument, Mr. Butler? You have the right to claim that.

Mr. BUTLER: Well, if he will admit it, it will save us "the right to claim it."

Mr. O'BRIEN: I think that is pure matter of argument. He has given his authority here, and it is a mere characterization as to whether he has or not. My judgment is that he has full authority for putting in these as illustrations, for which purpose he gave them. Mr. Butler seems to think he has no authority. Now, that is a matter for final argument, I think.

Mr. BUTLER: I didn't intend to pursue it further, but I would like to have that question answered.

A. I think I am perfectly justifiable in taking the stand which I have of the 95 per cent. I think I have cited the reasons.

Q. No, I didn't intend to go into the right or the wrong of taking the 95 per cent but I did intend to ask you whether attributing that to Myers was not wrong and an addition to anything that can be found in his opinion.

A. I think not, sir.

Q. Well, show me in his opinion. You have just told me, have you not, that there is not any justification in his opinion for adding 95 per cent of the switch-engine mileage to the freight side.

A. I don't think I made that statement. I will answer your question now. Page 105 states that switching-engine mileage should be included and that a switching-train mile is probably as injurious to the track as a revenue-train mile. There is a justification for the assumption that the switching mileage is on an equality with the freight mileage in making a distribution of these items.

Q. Does that statement relate to a division of the switch mileage between freight and passenger, or does it relate to a comparison as to the injury of the track of a switch mile compared with a train mile of either class?

A. That is a comparison with reference to the switch mileage as compared with a freight-train mileage, and is quoted as the justification for using the full 100 per cent switching instead of 50 per cent switching.

Q. Yes, but he said that the passenger-train mile injured the track as much as a freight-train mile; he put them on an equality, didn't he, so it wasn't necessary to distinguish between the two in that statement?

A. No, sir, I have taken them,—when I took 5 per cent of the switching and added it to the revenue-freight-train mileage or engine mileage, I then assumed that this switching mileage of 5 per cent which I added had an equal effect with the passenger mileage. Having that point to justify my use of the full 100 per cent of the switching, we have a statement on page 106 and the top of 107, "For these reasons it was concluded that the cost of the maintenance of way which depends upon the traffic should be apportioned between passenger and freight on the basis of the revenue-train mileage, including switching mileage on some basis in the freight-train mileage." Therefore, as he had authorized the including of switching on some basis and I found that 5 per cent, in my opinion, was a reasonable amount to include, I took the 5 per cent and transferred it to passenger, leaving the 95 per cent

of the switching mileage in freight.

Q. And considered the switch mileage equivalent to train mileage; that is the way you did?

A. Yes, sir.

Q. Now, read again the item that I first called your attention to on page 107, which is this, to-wit: "Passenger proportion 36.44 per cent, revenue-train mileage, switching in freight for one-half amount." That does not refer any portion of it to the passenger business, does it?

A. No, sir; it simply cuts the switch mileage in two and adds it to freight.

Q. And considers two switch miles as equal to one freight-train mile, and charges it all to freight on the basis of two units switching miles equivalent to one train mile. Now, that is exactly what that is, isn't it, and exactly so expressly stated?

A. Yes, sir.

Q. But instead of your doing that, you took the full 95 per cent of the switch miles, considered it equal, by reason of the statement which you have just read, to a train mile, and charged that to freight, which had the effect of running the freight cost up high as compared with the passenger cost?

A. You will note in that, Mr. Butler, that Mr. Myers does not use the one-half of the switching mileage, nor does he use all of it; he makes a statement there as to what effect it would have by placing it in those two proportions; he then, after discussing that, accepts the road's apportionment of it and uses neither. I am using on the basis—

Q. Did you accept the Road's apportionment of it?

A. I did not. I am using, as I said, as the justification for the amount I have quoted, his opinion here, which he did not use in his final result, but it is his opinion and I have used it, sir.

Q. He used the road's apportionment?

A. Yes, sir.

Q. And you declined to?

A. Yes, sir.

Q. And you called the result "Myers"?

A. Yes, sir.

Q. And that is justified, in your opinion?

A. I was fully justified by the quotations I have made as to what he considered the proper basis.

Q. Now, he set up his view and considered two switching miles equivalent to one freight-train mile?

A. I beg your pardon, he did not, sir.

Q. I thought you told me that that which I just read on page 107 did not attribute anything to passenger at all, but attributed all the switching to freight on the basis of two switching miles to one freight-train mile; I so understood you; did I misunderstand you?

A. No, sir, there is one computation on that basis, and there is another computation on the full basis. You are quoting the lower amount and neglecting the other. He uses neither. But he states in his opinion, which I have quoted from, page 105, that a switching-train mile is probably as injurious to the track as a revenue-freight-train mile. Therefore, the passenger proportion of 31.76 train mileage switching in freight for full amount is the one to which he is inclined and the one which I have used.

Q. Then as I understand it, it was this way: in one computation Myers attributed half the switching mileage to the freight business, because he considered, for the purpose of that illustration, two switching miles equivalent to one freight-train mile; then, in another illustration he considered the miles equal in potency and included it all with the freight; am I right about that?

A. Yes, sir.

Q. And then he didn't use either of them, but took the railroad company's allocations or divisions; am I right about that?

A. I read that road's apportionment $92,000, but I noticed that he has taken the road's apportionment of $92,000, which apportionment of $92,000 is based on the use of the switching-freight mileage in total in freight. Now, the exact basis of the heading "Commission's Apportionment" and "Road's Apportionment" is not clear to me just at the moment until I can read the context. It is evident that on some basis the road has apportioned more to Wisconsin than he has, or to passenger in Wisconsin than he has, and that on the basis of the road's apportionment of passenger items the percentage he has used is on the switching mileage in full charged to freight. I have that here in mind now, and I will explain the table to you.

Q. I think I understand it sufficiently for the purpose of my next question.

A. You will notice that the Commission's apportionment to maintenance of way is $248,000; the road's apportionment is $291,000. Of each of those he has taken and shown what the passenger proportion would be of the maintenance of way items on the full switching mileage included and on the half switching miles included in the freight. On that basis of the switching mileage in full chargeable to freight, the apportionment of the amount that the Commissioners had charged to this account would be $79,019.87. The same proportion, using the switching mileage in full, chargeable to freight of the road's apportionment to maintenance of way would be $92,487.21. In taking the $92,487.21 he has used the switching in full chargeable to freight in his final determination of this account, but has accepted, for some reason, (probably contained prior to this) the road's apportionment to the total maintenance of way in Wisconsin.

Q. In making your table which you labeled "Prof. Myers," did you follow either illustration, found in the opinion or final conclusion of the Commission as to what was right, or the apportionment of the company?

A. No, sir, I took from that the 5 per cent and charged it to the passenger account—the 5 per cent of the switching; Prof. Myers left the full 100 per cent of switching in freight when he made that division.

Q. In one of his illustrations?

A. In the figures which he finally used, sir.

Q. So that the figures which you bring in here in this respect on the Myers basis are not on his basis at all but on your own?

A. Mr. Myers made no apportionment between freight and passenger, though he stated distinctly that an apportionment on some basis should be made. For some reason he did not make it; I did, on the authority that it should be made, and I have used 5 per cent. In that far I felt authorised in following Mr. Myers and diverging from him on the 5 per cent although he did not use the 5 per cent in making his computations.

Q. I don't understand whether you intend by what you have said to answer my question affirmatively or negatively; which did you intend?

Mr. O'BRIEN: The answer is plain, I think, Mr. Butler.

WITNESS: I think the statement is fully made there.

Mr. BUTLER: Read the question.

The following question read: "So that the figures which you bring in here in this respect on the Myers' basis are not on his basis at all but on your own?"

Q. Can you answer that yes or no?

A. They are on Mr. Myers' basis.

Q. Point out any statement that justifies charging to freight 95 per cent of the switching.

Mr. O'BRIEN: Don't you think he has sufficiently done that.

WITNESS: I have done that two or three times.

Mr. BUTLER: Yes, but I want him to answer correctly; I want him to answer in accordance with the facts.

Mr O'BRIEN: Now, I suggest that this is fully explained and that really it is not necessary to take any more time on that.

Mr. BUTLER: Well, does counsel on the other side claim that there is any justification for taking the 95 per cent—not as a matter of right or wrong, but as a matter of an exhibit of how Prof. Myers divided?

Mr. O'BRIEN: Well, I will be very glad to explain that: we claim that this column 3 headed "Prof. Myers" is prepared to all intents and purposes as on the basis outlined in the decision of the Wisconsin Commission in the Buell case, as that decision has been interpreted by Mr. Hillman, the present witness and accountant, and that, in this particular respect he has now spoken of, he has deviated from the method outlined in the Buell case to the extent that he has attributed to the cost of passenger business 5 per cent of the switching.

The MASTER: Well, as I understand, he has followed what he conceives to be Mr. Myers' method, but not the method which was pursued by the Commission in making their determination in the case.

Mr. O'BRIEN: As I understand it, to that extent, to the extent that he has deviated from it by attributing 5 per cent of the switching to the passenger-train mileage.

Mr. BUTLER: I think that is satisfactory.

WITNESS: And to that extent only—of the attributing of 5 per cent to the passenger mileage.

Mr. DURMENT: Well, just let me put in one word here. The witness has said, and I think it is justified by the record, that he finds authority in Mr. Myers' statement of his opinion there

for not attributing either the half or the whole of this switching mileage. Now, his construction of that may be wrong or right.

Mr. BUTLER: Well, of course, there is nothing of that kind in the testimony.

The MASTER: That is something that Mr. Myers has left indefinite. He has not fixed that matter; he has made a suggestion or statement there, and where he has not followed the division that was adopted by the Commission but by reason of the remark which Mr. Myers has made, he has assumed something of his own.

Mr. DURMENT: Yes.

The MASTER: Which he considers he was authorized to do by that statement made by Mr. Myers.

WITNESS: That is the statement, your Honor, but just one item I want to speak of in that: in this statement which has been referred to on page 107, the figures which Mr. Myers has used finally include the switching at 100 per cent freight. He did not, originally, charge as much to maintenance of way and structures as the company did; and when it comes to the application of the percentage which is produced by using the switching mileage at 100 per cent, Mr. Myers has applied that percentage to the company's figures and not to the Commissioners' apportionment of the total amount to be so divided. I have deviated from him only in the assignment of 5 per cent of the switching to passenger traffic.

Q. And he made it all?

A. He took it all, yes, sir.

Q. That is your interpretation of his opinion?

A. Yes, sir.

Q. Why didn't you follow his method and divide as he did when you were coming in to make an exhibit of what Mr. Myers did in fact do? It wasn't a question of what he ought to have done or what was right, because you set that up in

A. For the reason that I have stated, contained on top of page 107, that "including switching mileage on some basis in the freight-train mileage," I have found what I considered the proper proportion of the switching mileage and have so placed it in here.

Q. So, in that respect, this Myers' column on this exhibit deviates from what Myers did?

A. From what he did, yes, sir.

The MASTER: Well, you deviated by 5 per cent?

WITNESS: Yes, sir.

The MASTER: Would you have felt justified in deviating 10 per cent?

WITNESS: No, sir, because—

The MASTER: That is, I mean by the rule that Mr. Myers adopted or proclaims there, would you have felt justified in adopting any other figure than 5 per cent, and if not, then why does that rule justify you in adopting the 5 per cent difference?

WITNESS: I would have adopted in Mr. Myers' method any percentage which the passenger switching business showed to the total switching business; and I have settled that amount outside, for purposes of this statement, as 5 per cent. Had I settled that from the outside data as 8 or 10 per cent, as you suggest, I then would have used 10 per cent of the mileage and transferred it. Mr. Myers, while he suggests that a certain portion is due to passenger and a certain portion to freight (that is, switching mileage should be included in freight on the proper basis) does not assign any portion of it, he omits that and uses the full 100 per cent and adds it to freight. Why, after suggesting that division, he does not follow it, I could not say; but I felt justified in following it. The 5 per cent does not depend upon anything in Prof. Myers' testimony; it is an outside determination, sir.

Q. A deviation, as Mr. O'Brien characterizes it?

A. Yes, sir, if you so desire it.

The MASTER: That is a deviation from what Prof. Myers actually did?

Mr. BUTLER: Yes.

WITNESS: Yes.

Attorney General YOUNG: But founded on the facts in this case.

Q. Did you deviate as to any other items in the whole list of the expenses from what Mr. Myers *did?*

A. I could not say that without reference to my working papers at present, sir, I would have to look through all those matters.

Q. Well, I would like to have you make a statement for us, if you can, inasmuch as this is to me quite important, showing the items that you followed what Mr. Myers did, the items that you deviated from what he did, and the items concerning which there is no rule laid down in this opinion. Now, do I make myself clear?

A. Yes, sir.

Q. Now, looking at the place we were before you stopped to correct your testimony of yesterday, we were talking of item 61, cattle-guards, road-crossings and track-signs. You attribute 25 per cent to wear and 75 per cent to use, and you had spoken of the wear and tear upon an important item of planking at highway crossings; what percentage in your opinion is wear on that item?

The MASTER: You mean stress or use?

Mr. BUTLER: Wear, I said.

The MASTER: Well, previously.

WITNESS: Wear used as—

The MASTER: Do you mean wear and use or wear and stress? You used the word "use" before that.

Mr. BUTLER: Well, I mean the same thing by "use" as I do by "wear."

The MASTER: I didn't know but perhaps you meant weather-stress and the wear.

Q. No, I just want to get the percentage of wear or use on that item in this account, according to your opinion.

A. The item of weather-stress upon the plank contiguous to the track, on both the outside and inside of the rail at a crossing, would be very small as regards weather-stress; it is practically all wear; and that is the reason that I raised the use-item under this heading of the expenditure No. 61 from 15 to 25 per cent.

Q. "Bridges Overhead," what percentage attributable to wear?

A. There is practically nothing.

Q. Roads under the track, what percentage attributable to wear?

A. There is practically nothing.

Q. Gates at crossings?

A. There there would be a large percentage attributable to what you might call wear.

Q. What percentage, within limits?

A. Fifty per cent.

Q. Signs, including railroad and highway crossing signs?

A. No wear.

Q. Mile-posts?

A. No wear.

Q. Whistling-posts?

A. No wear.

Q. Location signs for water stations and stations?

A. No wear.

Q. Cattle-guards?

A. The wear there would be quite slight; probably amounting to not over 10 per cent.

Q. [redacted]

A. [redacted]

Q. [redacted]

A. [redacted] [redacted] [redacted]

Attorney General YOUNG: "Opinion" might be a better word still.

Mr. BUTLER: "Necromancy" is the word.

Q. Renewal of rails, item 62,—the life of rails varies, does it not?

A. Yes, sir.

Q. According to use, other things being equal?

A. Yes, sir.

Q. And the life of a rail on a main line, busy track, heavy traffic, is shorter—

A. Yes, sir.

Q. —than on the branch?

A. Yes, sir.

Q. That is true on the Northern Pacific road, which you had under consideration, isn't it?

A. It is true of any road.

Q. What is the average life on the branches of rails? Have you any information on the Northern Pacific?

A. No, sir.

Q. On the main line?

A. No, sir.

Q. Is the percentage attributable to weather-stress the same on the main line as on the branches?

A. Yes, sir, I have used it the same.

Q. I know you have, but is it in fact the same? Is this another case of averaging?

A. It would be the same on either.

Q. Assume the life of a rail to be ten years on the main line, what percentage is chargeable to weather-stress?

A. 10 per cent.

Q. Assume it to be twenty years on the main line, what percentage is chargeable to weather-stress?

A. 10 per cent.

Q. Assume it to be fifty.

A. 10 per cent.

Q. Assume it to be one?

A. 10 per cent.

Q. Why? Are all those answers consistent with reason and the truth?

A. Because the weather-stress on rail is affected by rust, and no matter how long the rail was in position it would rust right steadily along, whether it was a new rail or old one in position, and that weather-stress would not be affected by weather you make two rails to occupy that space during the year or one rail during the year, the rust would go right on.

Q. Would the destruction by rust be as great in one as in fifty years?

A. Practically, yes, sir.

Q. Be as great in six months, 10 per cent of the value?

A. Yes, sir, that destruction would continue right along.

Q. The same on steel as on iron?

A. No, the iron would rust probably more rapidly.

Q. How much, assuming ten years?

A. I don't know.

Q. Were there any iron rails in use on the Northern Pacific?

A. A few, yes, sir.

Q. Have you any idea about what ought to be charged to weather-stress there?

A. I did not consider it at all, sir.

Q. Then, as I understand it, given a piece of road with traffic such as to wear out a rail in one year, the cost of renewing that rail ought to be divided 90 per cent to wear and 10 per cent to use?

A. Yes, sir.

Q. And when the traffic was such that the rail could be used for fifty years, the same basis?

A. Yes, sir.

Q. It therefore follows, does it not, that the full amount of depreciation by weather-stress occurs in the first year and that thereafter it is immune?

A. The rusting and wear are going along hand in hand.

Q. Look at item 63, renewal of ties. Ties last longer in the main line where it is busy and the traffic heavy than on a branch where it is light?

A. There is very little difference in the life of a tie. It depends upon climatic conditions rather than the wear of the traffic.

Q. Did you examine the accounts of the Northern Pacific Company to see what the percentage of renewals was from year to year on the main line, which is busy, heavy traffic, as compared to the branches, where the traffic is comparatively light?

A. No, sir.

Q. Do you say it is the same?

A. I should judge it would be very closely the same.

Q. As a railroad man, your view is that a tie will last just as long in a track that doesn't do any work as in a track that does?

A. Approximately, yes, sir.

Q. And it is all chargeable to weather-stress?

A. No, sir, there is a percentage of wear there, which is the reason that I used the words "approximately as long" and not absolutely as long.

Q. Then the greater the wear the less the weather-stress and the less the wear the greater the weather-stress, because the two together make the total; am I right?

A. Yes, sir, that is right.

Q. That is right?

A. Yes, sir.

Q. So then it follows, does it not, that on the busy main

line there is a greater element of wear than on the comparatively idle branch?

A. Yes, sir.

Q. So the percentages on the main line and on the branches should be different in dividing between weather-stress and wear?

A. Yes, sir, they should.

Q. What should it be on the Little Falls? the most idle line, we will call it, for the purpose of my example.

A. I don't know, sir.

Q. Within limits?

A. I should say that the weather-stress would probably rise to 90 on that.

Q. And on the main line where it is the busiest?

A. It would drop below 80.

Q. So the range, on the whole, would be from 10 to 20?

A. I think so, sir.

Q. Did you ascertain by any examination to find out the comparative life of ties or the amount expended in a given period on the main line compared with the branches?

A. No, sir.

Q. Then in order to make an average, you would have to have some basis for the conjecture, would you not?

A. Yes, sir.

Q. You didn't have sufficient basis to make an estimate by computation?

A. No, sir.

Q. And the percentages which you have taken, I believe, are 17½ and 82½?

A. Yes, sir.

Q. That is the result of conjecture?

A. No, sir.

Q. Guess?

A. The result of conference with Prof. Myers. There is

the point where I told you I had one more conference with Prof. Myers than as indicated on the following of the Buell case.

Q. You didn't talk with any other railroad man, the section men you met down in Kentucky?

A. I talked it over a great many times with other parties, but—

Q. Then this division is based upon the opinion given you by Prof. Myers, which you found backed up by the section men that you talked to?

A. Yes, sir.

Q. Did you talk to many section men—section foremen?

A. No, sir, not over half a dozen.

Q. Did their opinions vary, or were they all alike that it was 17½ to use and 82½ to weather-stress?

A. The section men,—you can never get an opinion as to percentage from a section man, but he will simply state that "it is much more," or "almost all," or something of that kind. You can never get a percentage out of a section man. He don't deal in percentages—it isn't his "strong suit."

Q. They don't understand what percentages mean, as a rule; isn't that true?

A. As a general rule, they do not.

Q. But when they say "a good deal," that means corroboration of Myers?

A. Tendency to corroborate rather than absolute corroboration.

Q. So you have given us the full basis of that division, have you?

A. Yes, sir.

Q. Look at item 64, renewal of fastenings. How did the Northern Pacific divide that item between freight and passenger?

A. Practically on a train-mile basis.

Q. You divided it on revenue in part and on your gross-weight train-mile basis, ignoring speed, in part?

A. Yes, sir.

Q. And you attributed how much to weather-stress?

A. 10 per cent to weather-stress.

Q. The same as the rail?

A. The same as the rail.

Q. And your answer with respect to rails would be equally applicable with respect to these items, the angle-bars, splice-bars, off-set bars, rail-chairs, step-chairs, bolts and nuts, washers and nuts, locks and spikes?

A. Yes, sir.

Q. The weather-stress would be the same in a year as in fifty years, just the same as it is on the rails, would it not?

A. Yes, sir.

Q. And would never wear out at all if they were not used, —within the life of several generations, anyway, would they, never give out?

A. They would last a long time.

Q. A century or two, undoubtedly, wouldn't they?

A. I don't think that long.

Q. Don't you think a rail would?

A. No, sir.

Q. Take the item of spikes, spikes in a track to hold the rails down; do you think that weather-stress ever makes it necessary to get a new spike?

A. A certain amount of the destruction of the spike is undoubtedly due to its rusting.

The MASTER: Due to what?

WITNESS: A certain amount of the necessity of renewal of a spike is undoubtedly due to the weather effect upon it.

Q. Did you ever see rust destroy a railroad spike that was in use, or see a railroad spike that was destroyed by rust, in whole or in part?

A. Yes, sir.

Q. A spike that is in use?

A. Yes, sir; they are covered with rust, as you know, as you have seen. You pull a spike out of the track, it is worn from the friction of the rail, and you will also note the fact that it is covered with rust; it isn't bright and new as it was, from the rust on it.

Q. It was probably rusty when it was put in, wasn't it?

A. It might have had some rust on it when it was put in.

Q. Take an angle-bar or one of these plates—what do they call them,—fish-plates?

A. Fish-plates; angle-bars are all right.

Q. The weather doesn't hurt them?

A. Certainly it does; I have made an allowance for the weather.

Q. I know you have made an allowance, but I am asking you as an experienced railroad man.

A. It does.

Q. And the nuts on the bolts?

A. Yes, sir, they all rust and are affected by the weather.

Q. Yes, I know they all rust, they are always rusty; you think that depreciates them?

A. Yes, sir.

Q. And just as much in one year as in fifty, the same as the rail, or forty or twenty or twenty-five, the reasonable life of such an instrumentality in use?

A. No, sir, I wouldn't like to say that, that they would rust as much in one year as in the other.

Q. But the depreciation would be the same if they wear out in a year as in fifty—was your answer as to rails.

A. Yes, sir, that was my answer, sir.

Q. And is it, as to nuts and bolts, fish-plates and spikes and anti-creepers and all that sort of stuff?

A. Yes, sir.

Q. Item 65, renewals of frogs, switches and miscellaneous track material, how did the Northern Pacific divide that?

A. On the train-mile basis.

Q. And you?

A. Partially on a train-mile basis and partially upon the same wear as the rail, 22 per cent on the train-mile basis, and the other the wear.

Q. Did that include interlocking plants?

A. Yes, sir, it includes all of those items.

Q. Switching and tower plants?

A. Yes, sir, that item included those.

Q. Under the Northern Pacific accounts in 1907?

A. I believe so, yes, sir.

Q. What is the weather-stress on a split switch?

A. The weather-stress on that would be, as far as I have assigned it to its position as a rail,—the weather-stress would be the same as upon the rails, 10 per cent.

Q. Would it in fact be the same?

A. No, sir, because a portion of that wear is assignable to another cause, but as far as that switch is a portion of the track and in use as a portion of the track itself, it would bear the same percentage as a rail.

Q. Yes, under your accounting, but I want your opinion as to the effect of weather-stress upon that instrumentality. Is it 10 per cent, the same as a rail?

A. No, sir, it is not.

Q. What per cent is it?

A. It would be 10 per cent upon about 75 per cent of its value.

Q. That would be 7½ per cent?

A. Yes, sir.

Q. And on a stub-switch?

A. On a stub-switch, that would take the same.

Q. A frog?

A. The frog we have treated the same.

Q. I know you have, but what is your judgment?

A. That would be about right.

Q. Did you ever know a frog or switch in your life to go out by reason of weather-stress?

A. No, sir, because the wear had worn it down; the wear and weather-stress to it combined had worn it down.

Q. On busy tracks they wear out very rapidly, don't they?

A. Yes, sir.

Q. Especially split switches, the points are destroyed, are they not, by the pounding of the wheels, and the rate of renewal is very high, is it not?

A. Yes, sir.

Q. And so it would not be right, would it, in a matter of that sort, that is so subject to great wear, to charge the same amount as you would to a rail?

A. I have not done so, no sir.

Q. Taken 10 per cent, haven't you?

A. No, sir, ten per cent of only a portion of its value.

Q. Now, the wooden structure in the interlocking plant would be the same as a freight house, wouldn't it, as far as the weather-stress is concerned, or a bow-window on a depot where the operator sits?

A. Yes, it would depreciate; there would be a weather-stress upon that the same as—

Q. It would be all weather-stress, wouldn't it? Take it on the roof of an interlocking plant, it would be the same as a whistling-post, wouldn't it?

A. Yes, sir.

Q. Now, did you ever analyze this account to find out how much was spent for each item?

A. No, sir.

Q. Have any basis to make an estimate, basis in figures or facts, as to what the road spent and where they spent it and

what they bought for it?

A. Yes.

Q. And charge into this account?

A. 22 per cent—

Q. For what?

A. —of the items just mentioned are dependent upon train movement. That was done in the light of a month's expenses which I had had in that regard where this item had been taken out from the renewals of frogs and switches, that the signal towers, interlocking switches had been removed from this item of renewal of frogs, switches and miscellaneous track material, and about 22 per cent of that was removed into this new account; and therefore I took 22 per cent of this account and divided it upon the revenue-train-mile basis, as these items of wear, I considered, as far as the interlocking went, were dependable upon the train movements and not dependable upon the usual wear which we have taken of the rail; and the balance was then divided as if it was part of the main-line track, as a rail in the main-line track.

Q. 90 and 10?

A. 90 and 10, yes, sir.

Q. Of this 22 per cent that you took out and divided on the train-mileage basis, there was some, was there not, of the wooden structure of the buildings, the roofs, the foundation walls, etc., of the building?

A. Yes, sir, there is something of that.

Q. And the renewal of those items is due wholly to weather-stress,—the roof, for example, and the wooden structures?

A. No, sir, not wholly to that.

Q. Well, largely?

A. Largely, yes, sir.

Q. 85 or 90 per cent, wouldn't you think so, the same as a tie?

A. Yes, 75 per cent, probably.

Q. Why didn't you divide that on weather-stress? If revenue is the basis by which deterioration on account of weather must be divided, why did you not act consistently in that regard?

A. Because in this case I had not separated the repairs of the signal towers from the interlocking and switching part of it. I had considered them as a whole and took that basis, sir.

Q. Because it was convenient, then, as an accounting matter to do it, the short way to do it?

A. Because I did not have the data at hand.

Q. But in so far as you failed to divide that quite important item on the basis of revenue because deterioration was due to weather-stress, you were illogical and in error, and adopted the same mistake that the Northern Pacific has made all through their division, the train-mile basis?

A. Yes, sir, I took the train-mile basis for the division of that.

Q. But you think that not the right basis for any item having a weather-stress factor in it, don't you?

A. Any item where you consider the weather stress, yes, sir.

Q. It is not right, is it?

A. It is so far in error.

Mr. O'BRIEN: I would like to state, at this time, that we will hereafter call the attention of the Court to the exact amount of the difference which would be found in the amount of the operating expenses chargeable to passenger traffic if the computation were made by divisions of the Northern Pacific in the state of Minnesota or if the road were taken as a unit in the state of Minnesota. My impression, from a hasty examination of the matter at this time, is that the difference is negligible.

Recess until 1:30 P. M.

AFTERNOON SESSION.

Q. Your item 67, repairs of fences, the Railroad Company divided on the basis of the train mileage of the trains passing, by the fences repaired, did it not?

A Yes, sir.

Q. You say it is a weather-stress item and therefore should be divided wholly, being all weather-stress, on the basis of revenue?

A. Yes, sir.

Q. And that it would be wrong and illogical to use any unit other than revenue to divide it?

A. Yes, sir.

Q. That is your position, is it not?

A. Yes, sir. I read that statement into the record, where I had considered both of those views, and the other view (and the one which I think is correct) is that fencing is not worn by train movement or dependent upon train movement, and the entire amount comes out of the earnings and should therefore be divided on the gross-earning basis.

Q. So the roof of a building, used for both freight and passenger, should be divided on the revenue basis because the weather is all that affects the roof of the building,—the trains don't run on it any more than they do on the fences; am I right?

A. There is, of course, a basis for what you say, but I should say that you are not correct in that.

Q. What would be the basis for dividing between freight and passenger the roof of a depot used for both?

A. On that we have taken the utility of the depot in its entirety, and have not made a distinction between the wear and the weather-stress; we have taken the depot in its entirety and charged according to its use, freight or passenger.

Q. The roof of a water tank—do you divide that on weather-stress?

A. Yes, sir, part of the water tanks are taken upon the weather-stress basis.

Q. The roof of a coal house—the same as the water tank, or the same as the depot, or the same as the fence?

A. We haven't distinguished that at all from the other repairs of buildings; it comes under that head.

Q. Do you divide it on the basis of weather-stress in revenue?

A. No, sir.

Q. On the basis of use?

A. The repairs of buildings is considered as a general account, that you may remember, and divided the same as if it were a general account, on the basis of the entire operating expenses up to that point, the same as if it were a general expense.

Q. Is that the way you did it?

A. Yes, sir, I believe so.

Q. What item is it included in?

A. I beg your pardon, I didn't so treat it. I treated it upon the allocations.

Q. Why not treat the fences on the allocations?

A. There is no allocation to freight and passenger of the fences, sir.

Q. Well, is there of the roof of a coal house?

A. There is the allocation of the repairs and renewals of buildings in which that is included, yes, sir.

Q. What is the purpose of a fence,—to keep stock off the track, to keep them from getting killed and wrecking the train?

A. Yes, sir; one item is fencing which is put up for the protection of train movement.

Q. Yes, and for the safety of life and property, isn't it?

A. Yes, sir.

Q. And if the Railroad Company elects not to fence and

[redacted] take the chance and, by reason of the absence of the fence, there is injury to property or persons, you divide that on the basis of use, do you not, train mileage?

A. The personal injury and death [redacted] is divided by the Northern Pacific on the basis of passenger allocation, and I suppose common items, on the train-mileage basis.

Q. Well, you divided the common items on the train-mileage basis?

A. I accepted their division of the [redacted]

Q. And that was divided on the train-mileage basis, wasn't it?

A. To a certain extent, yes, sir.

Q. All the common items?

A. Common items, yes, sir.

Q. Now, why should not the division of the [redacted] that is to protect against the damage to property be made on the same basis as the damage to property resulting from an insecure fence or the absence of fencing?

A. I will have to quote from my [redacted] which I think I read in my direct testimony: "There are two views on this subject: one is that the fencing [redacted] the protection of the train movement and that therefore the expense should be divided on the train-mile basis exclusive of switching; the other view, and the one which I think is correct, is that the fence is not worn by train movement or dependent in any way upon train movement, and the entire amount is therefore to be divided upon the [redacted] basis of 72.76 freight and 27.24 passenger."

Q. A division on the basis of the train-mileage [redacted] you have given us at 58.8 freight and 41.2 passenger, would increase the passenger charge very much, wouldn't it?

A. Yes, sir.

Q. And you elected to take the other [redacted]

A. Yes, sir.

Q. Notwithstanding it was for the protection of the train and notwithstanding that damages resulting from absence of fences would be divided on a train-mileage basis properly?

A. Yes, sir.

Q. You thought this item all ought to be divided on the revenue basis as being the more directly connected with the matter in hand?

A. Yes, sir, not using the words "more directly."

Q. That is, the rates, you think, are more directly dependent upon the fence, or the fence more dependent upon the rates than train safety?

A. Yes, I think the gross-earning basis is a more proper basis of division than train mileage.

Q. Repairs of water supply the Northern Pacific divided on the basis of the train mileage, basis of the use. The water supply being there for the benefit of the trains, you charged to each according to the number of train miles, did you not?

A. Yes, sir.

Q. You divided this item—

A. One-half of it on the basis of the use of the water, as allocated by the Northern Pacific road.

Q. Where, in what item?

A. In the item of water supply, No. 26.

Q. Direct allocation on the basis of the quantity of water, or the number of engines, or the number of trains, or the number of train miles?

A. The next item is water supply for locomotives. This is marked as allocated, and I have so accepted it.

Q. On what basis was it allocated?

A. I do not know.

Q. Why did you accept it?

A. I have accepted it in spite of the fact I consider some error must have been made here and that the allocation is

wrong, passenger being charged with too heavy a percentage.

Q. Why did you do that?

A. Because it is marked "Allocated" on their books, and I so accepted it.

Q. Is the word "allocated" written on the books?

A. It is so marked upon the memorandum which my men took off and I suppose it is correct.

Q. You have referred to that so often, let us clear that up now. Do you know whether any of these items which you have said are marked "allocated" on the books of the Company are so marked?

A. I do not think they have the mark "allocation" on them.

Q. Not one of them, is there?

A. No, sir, it is a term used for a direct assignment to freight or passenger.

Q. They are divided on the face of the book, are they not?

A. They are assigned to freight or passenger, and in that respect allocated, and as far as I know, the assignment is directly upon the use of the article and not upon a division.

Q. Did you not find in your investigations, Mr. Hillman, that it is common for the Northern Pacific to allocate directly what they can, divide on an arbitrary basis the balance on each voucher as it comes in, and set the total of the divisions in separate columns to freight and passenger?

A. The construction of their books would indicate that that has been done, yes, sir.

Q. So that it is not right, then, to say that each item that purports to be divided upon the books of the Northern Pacific Company has been directly allocated, is it, but would be right to say that it was either allocated or divided in whole, or part allocated and part divided; that would be the right way, wouldn't it?

A. As their books are construed and as taken off, I should say that those divisions and allocations are distinctively kept

on their books. That was my impression.

Q. Yes, but separated on the voucher, the voucher showing what was a direct allocation, in each instance?

A. Yes.

Q. And also showing the amount so directly allocated, and the balance if any to be divided on an arbitrary basis, how divided, and the basis of it?

A. It was my understanding, and I think I am correct in it, that where such an item was in the voucher, it was so noted (or their voucher abstract) and so carried into the totals, as a "common" or an allocation. I have treated it so. I may be in error in some points on that.

Q. Now, water supply would be all common, wouldn't it?

A. Not necessarily, no, sir.

Q. Where freight and passenger engines both take water from the same tank or plant, how could it be allocated?

A. By the engines taking the water, whether it is a freight engine or passenger engine.

Q. Measure the water?

A. They take a tank full of water, it is measured by tanks; no tank meter to measure them, but it would be measured by tanks.

Q. That is customary in railroad accounting?

A. It is, frequently, yes, sir.

Q. What companies do it that way?

A. I think that most of them have that division.

Q. The Northern Pacific?

A. I think the Northern Pacific have it. I am not sure whether they do or not. I think the Great Northern—

Q. Will you express the opinion that there is a solitary cent in item 26 that is allocated? isn't that all divided on some basis, the engine mileage, freight and passenger, that take water?

A. I couldn't say as to that. As I say, it is noted so in their usual method of allocation on their books and has been accepted by me.

Q. So when you came to item 70 you divided the total of that item in two?

A. Yes, sir.

Q. And then you divided half of that amount on the basis of the division of item 26 by tho Company,—which basis you did not know?

A. Yes, sir.

Q. Now, which half was that?

A. It don't matter.

Q. No, it doesn't in the figures, but why half of it? Did you attribute half of it to one thing and half of it to something else,—half of it to weather-stress?

A. Yes, sir, one-half is due to the use of the water.

Q. Yes, and one-half—

A. And one-half is due to the depreciation of the plant from weather-stress.

Q. By reason of weather-stress. So that other half, you would insist, ought to be divided on the basis of weather-stress?

A. Yes, sir.

Q. Water is the product of the plant, isn't it?

A. Yes, sir.

Q. And the plant may be considered the machine for producing the water, may it not?

A. Yes, sir.

Q. And it is the universal rule, both in the theory and practice of cost accounting, is it not, to apportion repairs and depreciation of a machine in accordance with its product?

A. Yes, sir, that is a fair basis.

Q. You made an exception to this rule of universal application in cost accounting, did you not, in this case?

A. In this case, yes, sir.

Q. And the effect of that was to reduce the passenger cost, wasn't it?

A. Yes, sir.

Q. Do you believe the rule that we have just stated and agreed upon is a sound one in cost accounting?

A. Yes, that is a very fair rule.

Q. If you had divided on the basis of the water supply itself and not introduced your weather-stress item, the division would have been 58.71 per cent freight and 41.29 per cent passenger, but as you divided it, you got 65.73 per cent freight and 34.27 passenger, did you not?

A. Yes, sir.

Q. In many of the instances where you have rejected train mileage as a basis of division of these common items in this grand account, you have departed from this rule of cost accounting to which we have recently adverted, have you not?

A. Yes, sir, from the general rule of cost accounting to which you have referred. There are, of course, some exceptions to it.

Q. And you have, broadly speaking, generally repudiated the train-mile basis of division of common items between freight and passenger?

A. The revenue-train mile, yes, sir, generally.

Q. The train mile is the product, is it not, of most of the activities and investments of a railway enterprise?

A. No, sir.

Q. The plant is used for producing train mileage?

A. No, sir.

Q. The operations of the engines are used for producing train miles?

A. No, sir.

Q. The employment of the trainmen is for the producing of train miles?

A. No, sir.

Q. Engine miles?

A. No, sir.

Q. Car miles?

A. No, sir.

Q. They don't produce those?

A. They do as an intermediate step to the final production.

Q. Of revenue?

A. Of ton-miles and passenger miles.

Q. Then it is merely a question of units, isn't it, whether it be considered the train or the ton or the per mile?

A. You of course could stop at any intermediate point, but that intermediate point would not show the final product which is brought out.

Q. But the passenger is not the unit of operations, is it?

A. The passenger mile is the product, yes, sir.

Q. Well, it is not the unit of operation; it is the passenger train, isn't it? Neither is the passenger car or the freight car or the freight carload or the ton, but the thing that moves as a unit over the track is the train, is it not, made up of all manner of things, dead and alive, revenue and non-revenue?

A. That is an intermediate factor which is produced by both passenger and freight. It is an intermediate factor, but it is not the ultimate factor, nor can it be considered the unit.

Q. It is the unit of operation?.

A. No, sir.

Q. What is the unit of operation of a passenger train? In carrying passengers what is the unit of operation, the movement of a passenger train, the movement of a passenger engine, the movement of a passenger car, or the movement of a passenger?

A. The unit of the movement is the train mile.

Q. And in freight, the unit of operation or movement is

the train mile, is it not, whether empty or loaded?

A. No, sir, not of the operation, sir; the unit of movement is the train mile.

Q. I used operation in the sense of movement.

A. Yes, sir.

Q. So understood, I was right?

A. Yes, sir.

Q. Now, in all these weather-stress items you have departed from the general rule of universal application in the theory and practice of cost accounting and divided on the basis of revenue, have you not?

A. I have divided on the basis of revenue, that is correct.

Q. You have departed from the product as a unit of division, whether that product be considered tons or cars or engines or trains or persons carried, have you not?

A. That has not always been used as the ultimate factor.

Q. What hasn't always been used?

A. Either of those items that you have mentioned hasn't always been used as the ultimate factor.

Q. I was referring to the weather-stress items divided.

A. To the weather-stress items? yes, sir, I have departed from the train-mileage basis and from the passenger- and ton-mile basis, excepting so far as the product of those ton miles and passenger miles run into the earnings.

Q. And your building up of the weather-stress elements here and your manner of division on the revenue basis in connection with your combination train-gross-weight mileage, has resulted practically in reducing the amount divided to passengers in the sum of about $277,000 in the maintenance account alone, has it not?

A. If you take into account the fact that the railroads have ignored the item of switching as well as the items which you have mentioned, yes, sir, I have reduced it $277,000. Now, in reference to the matter which you have spoken of,—

Q. Now, let us be clear about that. That is, your weather-stress theory and your combined mileage resulting in 81.648 per cent freight and 18.352 per cent passenger, applied in the various ways, has brought about this reduction?

A. Yes, sir, the application of it, and including, of course, the switching as a factor. Now, with reference to the matter which you spoke of, cost accounting and my stating that the ultimate unit of the division and the ultimate product of the trains was ton miles and passenger miles, you must remember that we are unable to compare the product of a ton mile with a passenger mile. The ultimate products of the two trains are dissimilar, and therefore the only way that you can reduce them to a factor where you can use the cost-accounting method is by their product in dollars and cents.

Q. So that I may understand that proposition just as you intend us to do, because you cannot compare a passenger mile with a ton mile, the units being so dissimilar, those units should not be used as the basis of division; that is right, is it, —the common items?

A. Yes, sir; you cannot use them—weather stress-items.

Q. And, one step farther, because you cannot compare a freight-car mile with a passenger-coach mile that unit will not do because the cars are so dissimilar?

A. For this final computation, yes, sir.

Q. And, because you cannot compare a locomotive mile pulling a passenger train with a locomotive mile pulling a freight train by reason of the dissimilarity of the service which they perform, that unit cannot be used?

A. Not in this final computation.

Q. And so, as respects freight trains and passenger trains, that unit cannot be used?

A. Not in this final computation.

Q. But if Prof. Myers was right, that each train, freight and passenger, had the same effect as respects wear and tear

upon the track, then as respects maintenance items of the track, there would be a unit of similarity, would there not?

A. Yes, sir, there you would come to a similar unit.

Q. And all those gentlemen who have divided these common items in the maintenance accounts on the basis of train miles have considered, have they not, the similarity of the trains, (trains freight and passenger) as a good unit for division?

A. Yes, sir, some time in the dim and misty past the train mile was recognized as a unit and they have rarely gotten away from it.

Q. Haven't gotten away at all, have they?

A. To a certain extent, yes, sir.

Q. Now, let us look at your item 72, repairs and telegraph. You divide 50 per cent on the basis of train mileage, do you not? because it is used to move trains, you said.

A. The repair of telegraph?

Q. Yes.

A. No, sir.

Q. You don't divide that on that basis?

A. No, sir, I divide that directly upon the weather-stress basis.

Q. You divided that all on weather-stress, I believe?

A. Yes, sir.

Q. On the grounds that the trains don't run over the telegraph wires?

A. Yes, sir.

Q. But for the pay of operating the telegraph you divided half of that on the train-mileage basis?

A. Yes, sir.

Q. Again you have departed from this well-recognized rule of cost accounting, the product being the operation of the train, and the repair and depreciation ought to divide the same as the performance, ought it not?

A. The repair, as an item, as you will understand is not the basis of the entire amount; the train mileage is not the basis of the entire amount.

Q. No, I understand it is the basis of half of the performance.

A. Yes.

Q. Now, why should it not be the basis of half the repair? It is the basis of dividing the wages of the men who use the plant; now, when the plant needs repair, why not divide a like amount of the repair on the same basis as you did the use?

A. For the reason that it is not affected by that; it is a weather-stress item entirely, sir.

Q. You think it more dependent upon the rates than upon the use?

A. Upon the final division between freight and passenger, yes, sir, as I have indicated. You must remember that in this matter of cost accounting there are a number of items which go in to make up the use of items, and the rule which we speak of is in general those items which cannot be well determined.

Q. Is it a rule of cost accounting that the selling prices of various articles shall be taken as the divisor of items of common expense in producing the articles?

A. Yes, sir, when the item comes to a point where the same machine is producing the articles which are dissimiliar in themselves, you are then driven, in cost accounting, to you might say the product in money of these items for a basis of division.

Q. If a machine were making coats and shirts and you couldn't apportion or allocate the repairs of the machine to the cost of either, then you would take into account the price of coats and shirts received by the manufacturer and divide on that basis?

A. Yes, sir, you would have to do that.

Q. And if some strong man, like the Standard Oil Company, should come along and make the prices of shirts very low, by reason of competition or for any other cause, then using of that factor would make it appear in your bookkeeping that you were making your shirts very cheap, would it not, and still show your profit?

A. Yes, sir, it would affect the price of your common—

Q. And that is perfectly logical when you have before you the question of the propriety of the relative prices of the product, is it not, or the relative cost of making them?

A. It is a fair factor of division, yes, sir.

Q. You think it arithmetically and mathematically sound and logical?

A. No, sir, I do not, arithmetically or mathematically.

Q. Or logically?

A. Logically, yes, sir; not arithmetically and mathematically.

Q. In such a matter as that the rules of arithmetic and mathematics are not synonymous with those of logic?

A. You are speaking of mathematical correctness. In here we do not pretend that these tables are mathematically correct.

Q. Now, before we leave the subject of these weatherstress items, I have understood you to say that where weather is an element in the cause of the necessity of the repair or renewal, the proper basis of division between freight and passenger of common items is revenue. Now, you have not followed, have you, that rule, generally speaking?

A. No, sir, in a number of items I have not followed it.

Q. Why not?

A. I have in a number of items followed where I had a factor for the use, utility, as you might say, distinctively freight or passenger, for a basis for the division of freight and passenger; as, for instance, in my buildings, I have discarded that

and accepted that unit. And I would also say that, as I intimated yesterday in my testimony, if I had a unit of sufficient data and broadness to discriminate in the maintenance of way and structure items, or in track wear between distinctively passenger and freight utilities, I should adopt that regardless of the method which I have adopted here.

Q. Now, in the repairs of equipment account, you have held, have you not, that weather-stress cuts no figure?

A. I have discarded the weather-stress item only for the reason that I have just stated, that I had a basic factor of the division there between freight and passenger which stood by itself and of itself, and have therefore accepted it.

Q. What is that? There is some work equipment, is there not, of great value and expense to maintain, employed by the Northern Pacific Company in Minnesota—

A. Yes, sir.

Q. —the use of which is common to both passenger and freight?

A. Yes, sir.

Q. All of that equipment is affected by the weather, is it not, at least as much as a railroad rail or a nut or a bolt or a fish-plate?

A. Yes, sir.

Q. Now, to be consistent, the element of weather-stress on snow-plows, wreckers, pile-drivers, steam-shovels, work-cars and the like, should be divided on some basis of revenue, either gross or net, or a modification of one or the other?

A. Yes, sir; it has so been done.

Q. You have divided it on that?

A. I have divided the work-train upon the basis of maintenance of road and structure items, in which the items included in work-cars are practically used.

Q. What per cent did that attribute to a snow-plow for use and for weather-stress? and the wrecker and the pile-

driver and the steam-shovel and the work-car?

A. I could not answer that without working out the amount of the divisions of each character which depended on the weather-stress and on the other in the maintenance of way and structure accounts, which would take some little time, but whatever percentage of weather-stress was assumed in those accounts 56 to 72 would reflect in the division of account No. 46, work-cars.

Q. Do you think that snow-plows and steam-shovels, as far as weather-stress is concerned, would be the same as ties and fence-posts and sign-posts?

A. You see by taking the entire use of the utility touching those—

Q. Yes, it would be, according to your method?

A. It would be incorrect.

Q. That is to say, because the snow-plow clears the track it would be affected by the weather on the average just the same as the rails and the ties would?

A. Yes, because the work-car was,—the repairs of that and to all the other things which were under that general heading of a work-car, were used for the maintenance practically of the utilities which are headed under maintenance of road & structures. You could fairly divide them upon the basis freight and passenger which those retain to one another, and in those items upon which we are dividing the item of weather-stress has been considered.

Q. Oh, I see. So then, it would be safe to say that a wrecker rots out as fast as the average weather-stress on all the other items that weather-stress is applied to, because it helps pick up the wrecks along the way maintained? Is that sound?

A. That is not the rotting of that utility or the weather-stress of that utility at all; it is the use of that utility as reflected by the items in which the weather-stress enters. I can't

say that it would not to an equal extent to these [illegible] being reflected by the division, would be taken into account.

Q. In the cost of wrecking [illegible] or conducting transportation?

A. Clearing wrecks is a conducting transportation item, sir.

Q. How do you divide it?

A. It is allocated.

Q. No division at all, then?

A. No, sir, it is allocated.

Q. Snow-plows,—conducting transportation or maintenance of way?

A. Snow-plows are under renewal of [illegible].

Q. That is in the maintenance account?

A. Maintenance of way and structures.

Q. Now, in the repair of snow-plows do you take into account weather-stress?

A. Yes, sir, it being included under the general division work-cars, and "snow and ice" being there.

Q. Steam-shovels where?

A. They are under that same division, I believe.

Q. Removing snow and ice?

A. No, sir; I mean repairs of work-cars and [illegible] the maintenance of road and structures items.

Q. Where is the repairs of steam-shovels and [illegible] and work-cars carried, in what general account?

A. In the maintenance of equipment.

Q. How divided?

A. Divided upon the basis of the maintenance of way and structures.

Q. What is the number in the maintenance of equipment account?

A. Under the heading of 16.

Q. Where is cribbing and [illegible]

A. In maintenance of road and structures.

Q. Timberwork where?

A. Depends upon what it is used for.

Q. In the maintenance of way and structures.

A. Depends upon what the use of the timberwork is. There is no distinctive account of timberwork or no use for it; it might be in any account.

Q. Now, if timber were included in the various maintenance of way and structures accounts, and should be divided on the basis of weather-stress wherever found, why should it not also in the maintenance of equipment for joint use,—and buildings, water tanks?

A. Because, as I have stated, that that work where it is charged distinctively to the utility (as it is) is part of the expense, and we cannot follow timberwork through from item to item and pick out how much timber we have in each of our expense items from 2 to 74 inclusive, and—

Q. In these items you have ignored, have you not, weather-stress: coal chutes, coal sheds, coal platforms, coal docks, wood sheds, and racks and common stations?

A. Yes, sir.

Q. In water tanks, pumping plants, reservoirs and pipe-lines you have called it 50 per cent weather-stress and divided on the basis of revenue?

A. Yes, sir.

Q. Hand-cars and track-tool houses you have divided 90 per cent on the basis of weather-stress and 10 per cent on the basis of use?

A. Yes; those items being included in item No. 57, repairs of roadway and track, and included in that, not being very large, there is no account taken of them as outside of the general division of this account 57.

Q. The wooden parts of interlocking plants, including tower houses, no weather-stress at all?

A. That is right, sir.

Q. Now, in the bridges and culverts, wooden bridges, wooden culverts, steel bridges, stone and concrete bridges, all treated alike, 85 per cent weather-stress and 15 per cent use?

A. Yes, sir.

Q. Cattle-guards, road crossings and track signs and crossings, including, as we have learned from examination, the bridge in a track over a highway?

A. No, sir.

Q. You are sure about that?

A. Yes, sir.

Q. You are sure the Company divided that?

A. If they do, they should not.

Q. Well, did you find out whether they do or not?

A. No, sir; I supposed, of course, they would not.

Q. So if that is the fact, there was an error there by reason of your understanding that they did it the other way?

A. Yes, sir.

Q. It would be absurd, would it not, to treat a bridge over a creek on one basis and a bridge over a highway on another?

A. That would be,—yes, sir, it would.

Q. Isn't it quite as absurd to treat a bridge in the track one way and a highway bridge over it in another?

A. No, sir; their use is distinctive. One is to carry the road in its traffic, and the other is to take carriages, horses, wagons and so on, over the track.

Q. What is that?

A. One bridge is used to carry the track and the railroad; the other is used as a viaduct to carry the outside traffic over the railroad. Their use is distinctive.

Q. So one should be treated wholly to weather-stress and the other only 85 per cent; that is the way you have done it,

isn't it? That is what you said, as I understood you, to me to-day.

A. Yes, sir.

Q. That the bridge overhead is all weather-stress?

A. The overhead practically weather-stress.

Q. But the item including wooden bridges and steel bridges for crossings overhead, was divided 75 per cent weather-stress, was it not?

A. Yes, sir, we allowed 75 per cent because of the other items which were included in that; it isn't distinctively belonging to underhead or overhead crossing, the grade crossings are included.

Q. Average is assumed without a basis for estimate?

A. Yes, sir.

Q. The matter we agreed upon as conjecture this morning?

A. Yes.

Q. Now, don't you think, as a matter of fact, that a steel bridge overhead and a steel bridge in the track ought to be treated the same way?

A. No, sir.

Q. Why?

A. For the reason that on the overhead bridge there is no wear whatever due to the movement of the trains on the track.

Q. Why didn't you divide all those bridges, then, on the basis of revenue without separating it at all?

A. On the bridge which carries the track and the railroad traffic there is a wear due directly to that traffic. We have allowed on those items 15 per cent for that wear where the bridge carries the railroad tracks. Where the bridge does not carry the railroad tracks and is an overhead matter, ther is no wear, and practically that bridge is taken as a weather-stress item entirely. The reason that there is 25 per cent in that account allowed to wear is because of the grade cross-

ings and the constant heavy renewals of the planking at these grade crossings, which renewal is practically entirely due to the movement of the traffic.

Q. Your idea that the plank crossings offset this 25 per cent of the wooden and steel bridges; that is, that the wear and tear—

A. That the wear and tear of the grade crossings due to traffic is sufficient in amount to make up 25 per cent of the total amount charged to this account, which is charged for grade crossings, overhead crossings and undercrossings.

Q. But you hold that the passage of trains does not wear or affect the overhead bridge, wooden or steel, and, therefore,—?

A. Practically not.

Q. You have never noticed, have you, the effect of the exhaust upon the steel?

A. Yes.

Q. Don't you think that quite as heavy as the effect of a train passing over a highway crossing has upon the plank?

A. Not if the bridge is kept in proper repair and properly painted.

Q. Did you see this bridge over at the Minneapolis Union Depot, with great heavy steel girders, that fell down about a year ago because of the action of the frequent movement of engines under it?

A. No, sir.

Q. Don't you know, as a matter of engineering, that that is a very serious item of wear on such bridges?

A. Vibration, yes, sir.

Q. No, no, the exhaust as well as vibration.

A. Oh, yes, sir, it has an effect on them, and that is the reason I said approximately. I had that idea, the passage of the train and the sulphur settling over the pipes, and the steam coming up in connection with it, making a—

Q. I misunderstood you. I thought you told me the passage of trains didn't effect the overhead bridges, either wood or steel.

A. I think I used the word "practically". I had that little matter in my mind, but didn't consider it of sufficient moment to mention it.

Q. I want to speak for a moment on the matter of general expenses. A large amount of these general expense items in the last account were divided between states on the revenue-train-mileage basis, were they not?

A. Yes, sir.

Q. On the Northern Pacific?

A. Yes, sir.

Q. That is the right basis for that division, and you accepted it, I assume?

A. I accepted it, yes, sir.

Q. And you think it right, do you not?

A. Well, we had that under discussion on the direct testimony, and I said that I didn't think it was the exact basis, but it was near enough to—

Q. What did you consider the exact basis?

A. We would have to take the items of all the preceding expenses that we had in all the states and sum them up and make the proration on that basis; and as the different bases would not be very great, from looking over it casually, I accepted that as a basis and am willing to let that go as a fair basis.

Q. Would it not be as consistent to divide these items between freight and passenger on the revenue-train-mileage basis as it is between states on that basis?

A. No, sir, I think not.

Q. Why not?

A. Because in dividing between states on revenue-train-mile basis you combine your freight and passenger-revenue-

train mileage to a certain extent and get a lump sum for that, and in this distinctive division between freight and passenger it would make a difference.

Q. In favor of the passenger or in favor of the freight cost?

A. If we used the train-mileage basis, it would of course give us more for the general expenses chargeable to passenger than are here noted.

Q. So you repudiated that, and after dividing the other items on these various weather-stress bases and this combined mileage that we have referred to, then you divided the general expenses, common items, on the basis of those other divisions?

A. Yes, sir, with the exception of item 87.

Q. What is 87?

A. Item 87 is the rental of buildings, tracks, yards and terminals.

Q. Insurance, I see, you divided on the basis of net income.

A. Yes, sir.

Q. On the ground that if they didn't insure at all, (bore their own losses) the renewal of the thing burned up would come out of the net earnings; that was your reason for doing it, wasn't it?

A. Yes, sir, I divided that on that basis.

Q. Can you think of anything in the whole system that that would not be true of? Can you think of anything that they would have to renew or repair or maintain that would not come out of net earnings, in the same sense that insurance or a fire loss would come out of net earnings?

A. No, that fire loss would be divided upon the other repairs, and, properly, I will admit that this item of insurance should have been taken and scheduled according to the valuation of their properties and should have been divided on the basis of the valuations of their equipment, of their buildings,

and all items insured, including the freight in transit, and—

Q. What effect would that have had upon the results that you have reached—increased or lowered the passenger cost?

A. I think that it would have lowered the passenger item considerably, sir.

Q. Why didn't you do it that way?

A. Because of the extreme difficulty which I would have in locating that item and I did not consider the difference which it would make of sufficient importance to do so.

Q. So you admit that your basis of division of that item is illogical and absurd?

A. No, sir, I admit that it is incorrect.

Q. Well, do you not admit that the reason you give for it is absurd, that the fire loss would come out of net earnings? couldn't that reason be given for any other item on the list?

A. That item of expense or the basis of that division on the gross-earning basis, as I said, is assumed as what I considered the best factor in lieu of working it out on the other basis.

Q. As I hold your testimony in mind, it was the net earnings.

A. I s. ..ld have said gross earnings.

Q. You made a mistake in there, then?

A. Yes, sir, for the reason, if you will remember, that I had in view, at the time, the use of double-column No. 5, which has often been discussed here, and I had frequently used net earnings on my memorandum which I had written out some months ago and had not always corrected that word "net" to "gross," and I may sometimes have used it there.

Q. Now, your traffic expense items, your outside agencies and the like, you allocated where you could, and then divided the rest on the basis of allocation, didn't you? That is to say, the salary of a freight soliciting agent in New York, you would charge to freight; in the passenger office in New York

you would charge to passenger; and where there was an employe engaged in service of both departments you would divide on the basis of the allocations of these amounts?

A. Yes, sir, I have divided the common on the basis of the allocated.

Q. So that if the Company has a freight agent in New York and a passenger agent in New York, you would assign the salary direct to the department and the office expenses and all that, would you not,—allocate it directly?

A. Yes, sir.

Q. But if they had a joint one in Philadelphia, you would divide between freight and passenger on the basis that the expense of the freight office in New York bore to the expense of the passenger office in New York?

A. If those two were the only allocations, yes, sir.

Q. Yes, using those for illustrations.

A. Yes, sir.

Q. Do you think they have any connection one with the other?

A. Yes, sir, I think quite a direct connection. It is but fair that the non-allocated expenses should be divided on the percentage which is shown in the allocated ones, is the notation I have.

Q. Now, as to advertising, how did you divide?

A. The next item, advertising, is almost entirely allocated ($21,129.42 being allocated,) leaving only $1,012 for division as common. For lack of a more effective factor, we have divided this on the gross-earning percentage.

Q. Why not on the basis of allocations? Wouldn't the allocated items for advertising in a newspaper have just as much relation as the allocated items for having men out on the street soliciting freight would to a joint expense some place else?

A. Hardly to that extent, I think, Mr. Butler. It is a very

close distinction, I will admit that, but there is enough of the distinction of advertising items which are entirely due to what you might call non-locatable items, such as you come to a donation for charity or donation to fairs and those things that are put there; they are in the nature of an expense which cannot be allocated, and those are the small items, I judge, which are non-allocated here, and as that, they are on that basis.

Q. What effect would it have if you divided the advertising on the same basis as you did the freight solicitors and outside agencies?

A. That is, used allocated expenses?

Q. Yes; would it increase or diminish the charge to the passenger cost?

A. It would increase our freight traffic, as all of the items which are allocated happen to be passenger expenses.

Q. Then it would increase the passenger, wouldn't it, if you divided on the basis of allocations?

A. Yes, sir, increase—did I say freight?

Q. Yes.

A. I beg your pardon,—that would increase the passenger expenses.

Q. The Company divided on the train mileage, didn't it, and your basis of division—?

A. I think it was just train mileage.

Q. And your basis of division in both the outside agencies and the advertising attributes less to the passenger cost, does it not, than the Company did on the train-mileage basis?

A. No, sir; on the total traffic department expenses on the first item I attribute $700, practically, less than the Company; on the next, the outside agencies, I distribute $3,000 more to passenger; and on the advertising I give $300 more to passenger than they do.

Mr. O'BRIEN: And the total?

WITNESS: And the total is $2,100 more to passenger than on the Northern Pacific basis.

Q. That is the only grand account where you increased the passenger cost over the Northern Pacific, is it not?

A. Yes, sir.

Q. And you repudiated the train-mileage basis there because you determined it to be illogical in the other accounts before you got down that far, didn't you?

A. No, sir, I didn't consider the train-mileage basis whatever in traffic accounts, it has no relation to them.

Q. I suppose the purpose of keeping a freight office is to get freight?

A. Yes, sir.

Q. It takes train miles to haul the freight, doesn't it?

A. Yes, sir, it is an incident in the hauling.

Q. A necessary one, though?

A. Yes, sir.

Q. And I suppose the purpose of a passenger office is to get passengers?

A. Yes, sir.

Q. And to haul the passengers takes passenger miles?

A. Train miles.

Q. Train miles?

A. Yes, sir.

Q. So there is at least some kind of a relation between train miles and these activities?

A. Yes, sir.

Q. It is so with advertising, isn't it?

A. Yes, sir.

Q. But there isn't any at all, is there, between the expenses at Philadelphia of the joint agent and the allocations in New York between the two?

A. Yes, sir.

Q. You think there is?

A. Yes, sir, you must remember in this case that, as I said before, the product of this railroad activity does not end with the train mile. The train mile is an incident in the product and a necessary incident and an incident that reflects to a certain extent the final product, but it is not the final product; and for that reason, when I stated that it had no reference to, this was what I meant, it certainly is a factor in the production—

Q. Is there any fixed relation in the traffic expense account between the amount that must be expended on the freight side and the amount that must be expended on the passenger side?

A. No, sir.

Q. The policy of the Company might be to stimulate the freight business by engaging men in outside agencies and advertising, and the like, to promote it?

A. Yes, sir.

Q. That wouldn't have any effect, would it, on the actual cost of similar activities chargeable to this account to promote the passenger business?

A. No, sir, that wouldn't have any effect on it because they might be equally "boomed," as you suggest, or one might be boomed and let the other remain quiescent for a year; but what I maintain is that the general division, where you can allocate those outside agencies and those traffic expenses, bears the relation to those which are not large enough to be divided. Now, there is sort of an anomaly here. It is frequently—

Q. I notice there is; I would like to have you clear it up for us.

A. It is frequently the case that the traffic obtained bears no relation to the amount of work that a man puts in on his freight; the fact is that the principal part of the work he puts in is probably on the freight that he don't get, he does more

trotting for that; it don't enter into the traffic of the road at all, and don't enter into the train miles, and yet when you come to that basis, you can only properly come, it seems to me, to the allocated items on those traffic expenses.

Q. I see. They furnish the only basis of division there is of the common items?

A. I think so, yes, sir.

Q. That is your idea about it?

A. Yes, sir.

Q. Well, now, perhaps we have got to an indivisible common item here, that there is no way to divide it. You agree with me, do you not, that a change in the expenditures, either freight or passenger, exclusively either one or the other, would not have any bearing upon the common expenditures in the traffic account?

A. In these traffic account items?

Q. You agree with that, do you not?

A. Yes, sir.

Q. Now, to illustrate that—I think it states it as I understand it, but to illustrate that, the increase of the expenditure exclusively to get passenger business in these traffic expense items would not at all affect the amount that should be charged to freight of the activities of a common agency, would it?

A. Yes, the general idea being that where they have the distinctive freight and passenger department on hand and running, would reflect the expenses of the minor office where one man was employed for the entire thing.

Q. You would think it would?

A. I think that is a fair basis for the division.

Q. What would you do in the case of a little road that didn't have any separate outside agencies at all but all of its outside agencies were joint, how would you handle that?

A. If they had kept no division of the time which they put

in on freight and passenger, I should divide those upon the basis of the gross earnings; and there is where that anomaly of which I spoke comes in.

Q. So then, the only basis of dividing of such items is the basis of earnings of all allocated items, on all common items?

A. Yes, sir.

Q. And neither has any relation to the question, then?

A. The allocation has a very decided relation to it, sir.

Q. Well, I don't understand now. Maybe you have told us, but I can't understand. We might take our New York and Philadelphia illustration: Now, we will say we spend $10,000 in New York for freight agents, $10,000 for passenger, and down at Philadelphia we spend $10,000 for both, and they are equally active in both departments.

A. That is, you can't tell what one did and what the other did?

Q. No, they are equally active in Philadelphia. The common items for freight and passenger, they do as much for freight as they do for passenger, we will say; your basis of division, then, would divide rightly, would it not?

A. Yes.

Q. $5,000 of the Philadelphia man's salary would go to each?

A. Yes, sir.

Q. But if the Company changed its policy and spent $20,000 in New York for passenger, made no change for freight, the activities of the Philadelphia agency remaining the same, your basis of division then would charge twice as much to passenger as to freight, while, as a matter of fact, the activities remained precisely the same; now, that is all true, is it not?

A. Under those conditions, yes, sir.

Q. So therefore I say the allocation, unless it happens to be by mere coincidence in one place, that cost of an exclusive

agency cannot be the measure of the activities incurring the expense as between the two,—a common and joint agency in another place,—can it?

A. Yes, sir, for the reason that an increase in activity along the passenger line such as you have illustrated in New York, and the policy of the road being to increase that activity, it would necessarily follow—perhaps not to the absolute degree in Philadelphia as in New York—but it would necessarily follow that their passenger activities in the Philadelphia office would be increased, and where you get outside of one office and come to a broader basis, where over three-fourths have been allocated and spaced, it is but reasonable to presume that any increase in the activity in the three-fourths would be reflected in the one-fourth which is yet undivided and common on account of it not being of the size to warrant separate agencies.

Q. Suppose your determination of that reflected stimulated activity of the joint agency was not justified; let us assume that that assumption be not well taken; then your allocation furnishes no basis for division at all, does it?

A. No, sir.

Q. It would be foolish and absurd unless the stimulation of a separate department would stimulate in similar degree the activities on the same side of a joint department, would it not?

A. Yes, sir.

Q. But you hold that it does, as a matter of fact?

A. It does, as a matter of fact, yes, sir.

Q. And that they can't help it no matter if they try?

A. Oh, they can help a great deal if they try, but we are dealing with a state of business and a state of facts which has a broad basis to go on, and we recollect that the road is not going to increase its activities in one department in a limited

territory and decrease it in the other. That is a reasonable supposition.

Q. Don't you think that earnings is more nearly related to that matter?

A. As I stated that in my answer—the anomaly of earnings and thinking that the allocation was a better basis than that; but that, in default of an allocation, I would take the gross-earning basis instead of the anomaly that they spend more time on the business they don't get than what they do.

Adjourned until Tuesday, July 13th, at 10 A. M.

FEDERAL BUILDING, St. Paul, Minn., Tuesday, July 13, 1909, the hearing was resumed at 10 o'clock A. M.

CONWAY W. HILLMAN,
recalled for further cross-examination, testified:

By Mr. BUTLER:

Q. Table No. 7 is your table in which you undertake a division of the freight expenses charged to the state, on Table No. 4 between intrastate and interstate, is it not?

A. Yes, sir.

Q. And Table No. 6 is one of the instrumentalities by which some of the computations are made?

A. Yes, sir.

Q. Now, I want, therefore, before entering upon a consideration of Table No. 7, to ask you a few questions about Table No. 6. I want you to enumerate as completely as you can what statistical accounting sheets were used in making up Division A of No. 6.

A. The train-sheets in Mr. Richards' office, superintendent of transportation. These train-sheets show the number

of loads and empties and the weight of the train at the initial point.

Q. Is that all?

A. That is all of the description of the sheets, yes, sir.

Q. Well, what else did you use?

A. I then took the distance which the train moved and reduced the initial weight to ton-miles by the distance traversed by the train, using, you might say, the initial weight as the factor. I then deducted from that total weight, which was the gross weight of the train, the weight of all the cars on the train, loaded and empty, equally the dead weight on the basis of 16 tons to a car. That is the basis of the making up of Table No. 6.

Q. Division A of Table No. 6?

A. Division A of Table No. 6, yes, sir.

Q. Did you use any way-bills to do that?

A. No, sir.

Q. Showed nothing about state or interstate business?

A. No, sir.

Q. And nothing about the loading of any cars?

A. No, sir.

Q. Nothing about the kind or class of any freight?

A. No, sir.

Q. And the weights were the estimated weights by conductors, that we have heretofore referred to?

A. Yes, sir.

Q. It did show the number of empty cars?

A. Yes, sir, both loads and empties.

Q. It showed the number of empty cars in each train, did it?

A. Yes, sir, the loaded cars, and also showed the empties, each separately; for instance, loads 24, empties 16.

Q. Were these train-sheets marked through or local to indicate or characterize the character of the train, or did you

classify between through and local?

A. I classified between through and local, with the advice of Mr. Macauley, Mr. Richards' assistant.

Q. He is the car accountant, isn't he?

A. Yes.

Q. You talked with Mr. Macauley, and then you took these train-sheets and classified these according to your own judgment of what they were?

A. Yes, sir, with advice from him when I was in doubt.

Q. You mean you asked him about certain facts? He gave you certain facts, I suppose, within his knowledge, and you made up your own judgment and was not guided by the advice of the car accountant; were you or weren't you?

A. Yes, sir; in any case that he would state that a train was a local or a through we would follow that advice. I would say that I did this myself for one division, and the balance was carried out under my instructions by clerical help under the direction of Mr. Yapp, and I suppose and am willing to state that he continued the same basis of operations that I had put forward.

Q. That division does not show, does it, the average loading of each train, through and local?

A. No, sir; I mean this table does not show it.

The MASTER: Did you mean by "division" Division A in this table?

Mr. BUTLER: Yes.

WITNESS: Yes, sir.

Q. Did you make any computation of the average loading after you classified the train,—the average freight tonnage carried per train, through and local?

A. It is possible that that would be on the sheets from which it was taken; I made no record of it for this table, and have no recollection of having done that work.

Q. Does the average loading of the through train as com-

pared with the local train enter into your computation?

A. No, sir.

Q. Your computation assumes them to be loaded alike?

A. No, sir.

Q. Doesn't assume anything about them?

A. No, sir.

Q. Assume the local train on the main line to be loaded alike equally with the trains on the branches?

A. Yes, sir.

Q. Did you make any computations from the train-sheets to ascertain whether that is true?

A. No, sir.

Q. Just assumed it to be true?

A. Yes, sir.

Q. A matter of conjecture. Did you make any examination to find the loading of cars hauling exclusively interstate business or the loading of cars hauling exclusively intrastate business?

A. No, sir.

Q. Or the number of cars that hauled both?

A. No, sir.

Q. Or the contents of such cars or the average weight of them?

A. No, sir.

Q. Or divide in any way between them?

A. No, sir.

Q. Your computations assume again, do they not, equality in all these regards?

A. Yes, sir.

Q. Conjecture. Now, in your Table No. 5 you make it appear that about one-fourth of the ton mileage of all freight trains is carried on what you term local trains; in Table No. 6, as I understand it, it appears to be about one-eighth. Which one is correct?

A. Table No. 6, Division A, shows 14.59 per cent of the net ton-miles carried on local trains, which shows the method in which the traffic was handled. Table No. 5 shows the way in which the freight was entitled to move.

Q. What percentage on local trains?

A. Almost 26 per cent, sir.

Q. All your computations proceed upon the theory that the intrastate business is moved in carloads, loaded as heavy as the interstate business?

A. Yes, sir.

Q. And that the local trains on the main line are exactly the same as the trains on the branches?

A. I would say in that respect, yes, sir.

Q. As respects the loading of cars and of trains?

A. Yes, sir.

Q. And classes of freight?

A. Yes, sir.

Q. Is carloading an important element in cost, in your opinion?

A. Yes, sir.

Q. Classes of freight an important element of cost of doing the business, in your opinion?

A. With reference to train movement only, as they impose a lighter or heavier load on the car.

Q. Does it cost any more to haul a loaded train than an empty?

A. Yes, sir.

Q. How much? Any way to figure that? Any system of accounts ever yet devised for railroad accounting that would tell the difference in cost between hauling ten empty cars and ten loaded cars over a division, or one empty and one loaded?

A. No, sir, there has been none devised.

Q. There can't be, can there, in your judgment?

A. It could be done, but it would be a matter of considerable detail.

Q. You never did it?

A. No, sir.

Q. Never knew anyone who did?

A. No, sir.

Q. You assumed the same amount of empty movement on the branches as you did in the local trains on the main line?

A. In assuming the cost per ton mile on the branch line and applying it to the main line it would necessarily indicate a parity of movement.

Q. Did you assume the same amount of empty movement on the branch line as you did on the main line, of local trains, for the purpose of your computation of cost here?

A. No, sir; I assumed the same cost per ton per mile of freight.

Q. Of the empties moved on both?

A. Yes, sir.

Q. Does the number of empties moved affect the question of cost per ton mile of freight?

A. Yes, sir.

Q. Then did you not necessarily assume that there was the same amount of empty movement on the branches as there was on the local trains on the main line?

A. Yes, sir, I stated that in my answer to your first question, that in assuming the 2.142 cents you necessarily assume the parity of movement between the two.

Q. Parity of loading?

A. Yes, sir; I meant parity of movement, parity of load.

Q. Parity of car loading, parity of train movement, parity of classes of freight?

A. Yes, sir.

Q. Parity of distance traveled and time?

A. Yes, sir.

Q. Parity of wages, parity of mileage, did you not?

A. All included in the parity of cost, yes, sir.

Q. Parity of grades—track grades?

A. All of those questions are included in the parity of cost, sir.

Q. Parity of track conditions as affecting cost?

A. Yes, sir.

Q. Of switching and yard conditions?

A. No, sir.

Q. Of freight train delays on account of passenger movement?

A. Yes, sir.

Q. Did you make any investigation to find whether there was a parity in any one of these things or the multitude of other things that you have assumed a parity in?

A. No, sir, except in a general way.

Q. Now, if there is not the same loading per car on the average of state and interstate, your conclusions are without justification, are they not?

A. Not solely in that factor, no, sir.

Q. If the parities necessarily assumed in your assumption of equality of cost do not exist, or if any one of them does not exist, the correctness of your conclusion is thereby impeached, is it not?

A. Yes, sir.

Q. And unless such parity substantially exists as respects all features and elements bearing upon the cost of doing the business, your conclusion would be substantially impaired?

A. Would be impaired, you say?

Q. Yes.

A. Yes, sir.

Q. And if they vary, all these conditions affecting cost vary, as for instance, these various items of expenditures and some of the items on Table 4 that we talked about, then the

conclusion becomes a mere conjecture, does it not?

A. No, sir.

Q. You think that you can conjecture the parities, base computation on conjecture, and the conclusion will not be a conjecture?

A. The subject of the amount that you use as a conjecture is not large enough, in my opinion, to affect the result materially; to whatever extent it exists, however, as I have said before, it does affect the total result.

Q. And without knowledge of such extent to a reasonable degree of accuracy, you cannot express the opinion, can you, that your conclusion has any reasonable value at all? We will pass to Table No. 7 and leave that question unanswered. Table No. 7 is a division of common items between state and interstate costs, isn't it?

A. Yes, sir, freight.

Q. All items of expense are common?

A. With very slight exceptions, yes, sir.

Q. Practically all common?

A. Practically all common.

Q. Now, this is a division that is not ordinarily undertaken by railway companies in the keeping of their accounts, is it not?

A. Yes, sir, it is not undertaken at all; as far as my knowledge goes it is not undertaken at all.

Q. Never heard of it being undertaken, did you?

A. No, sir.

Q. By a railroad company or anybody else, except yourself or under your direction, as a matter of accounting, and you never did it except for the purpose of litigation, did you?

A. No, sir; it was undertaken to a slight degree in the Kentucky case by the Railroad Commission of Kentucky.

Q. After counseling with you?

A. No, sir.

Q. You were their chief accountant?

A. Not at that time; they made their first computation, but on the subsequent litigation, yes, sir, into the details. And outside of that (which was also for the purpose of litigation and of this) I do not know of any other division between inter and intra.

Q. So that, as far as this table is concerned, we are dealing with a novel development of cost accounting of which you are the author?

A. Yes, sir.

Q. You are not only the author of the scheme, but you are the author of all the details of the method; there is no precedent laid down anywhere by anybody for a single division that you have made here, is there?

A. No, sir.

Q. And they are all the product of your own reflection and mental activity upon this point; is that right?

A. Practically, yes, sir.

Q. Now, I gained the idea that there were certain rules and principles for division of common items of expense in the maintenance account when we were talking about Table 4, and that is that expenditures due to weather-stress should be divided on revenue; did you divide here on revenue in this account, or did you divide on units of use measured by tons or ton-miles in the maintenance account? Like the fences, you wouldn't divide on train mileage because the trains didn't run over the fences, between freight and passenger; now, you come to a division between state and interstate, and you divide on the basis of ton miles moved over the track, do you not? in that vast amount of items by which you reduced the cost of the passenger business under the maintenance account on that Table 4, $277,000; on this account you decline to take revenue but take use as the unit of division, do you not?

A. Yes, sir.

Q. And the same on your Table 11?

A. Yes, sir.

Q. If you took revenue here, assuming that the exhibit introduced with Mr. Elliott's testimony (Ex. 79) is right, the revenue per ton mile of the intrastate business is as 144 is to 100 when compared with the interstate revenue per ton mile, is it not, in Minnesota?

A. I am not familiar with the figures, but I suppose that is the fact.

Q. Assuming that to be it.

A. I suppose that is correct.

Q. So shifting from revenue to make your division according to weather-stress, when you come to the state and interstate division, increases the cost of the interstate business and reduces the cost of the intrastate business from what it would have been had you been consistent and used revenue as a weather-stress divisor?

A. Yes, if I had used the gross earnings in this case as against the factor which I have used, it would have made a difference in the total result.

Q. As to the items affected—the weather-stress items affected—it would have made the difference as 144 is to 100, which is the relation of revenue per ton per mile intrastate as compared with interstate?

A. Yes, sir, as far as it affects those items.

Q. Now, the effect of your taking revenue for your divisor in the passenger and freight division was to reduce passenger cost, was it not?

A. The effect, yes, sir.

Q. Now, the effect of departing from it in your state and interstate division in the freight cost was to reduce your intrastate freight cost, was it not, in the degree that we have stated?

A. Yes, sir, that would be the effect.

Q. Would it not be as reasonable to use use dividing between freight and passenger as between state and interstate?

A. I considered it would not, sir.

Q. Would it not be consistent to use revenue for this division between state and interstate as well as between passenger and freight of the maintenance accounts?

A. No, sir, I considered it would not.

Q. You considered the element of use to be the proper test to divide between the two kinds of freight cost, didn't you?

A. Yes, sir.

Q. But the element of revenue between freight and passenger, and you repudiated the element of use, as being wholly worthless, did you not,—the train mileage?

A. I did not use the element which you state.

Q. And held that it was wholly worthless, to such an extent that you reduced the passenger cost about $277,000 by this weather-stress factor and this combined mileage that you used?

A. No, sir, I did not. You must not mistake. While that account was reduced $277,000, the principal part of that account was not reduced by the use of the weather-stress items.

Q. Well, that will show for itself.

A. That will show that the principal reduction there was due to switching, and so when you speak of $277,000, you are overstating the effect of the weather-stress. Now, I will say, as we were speaking of this (if it is allowable here to state the reason that I made the change here,) if you desire it, or if you desire it to go over to the re-direct, we will let it go until then.

Q. Just as you wish.

A. What do you say, Mr. O'Brien?

The MASTER: I think I would rather have it now.

Mr. O'BRIEN: So would I.

WITNESS: We come, as we were discussing the other

afternoon, to the division between freight and passenger, and coming to what you might call a common basis or unit of division. The ton-mile was in passenger compared with a passenger mile; they are not comparable in the divisions, and therefore we reduced them to their common factor for the division between freight and passenger, which was the moneys produced for those items. We now come to a factor which is a ton-mile in both cases, and is the product which is made a ton mile in both cases, inter and intra, and therefore we divide this matter on the ton-mile basis and not on the passenger mile; and as the weather-stress would divide on the same way as the use, having this factor for the use we included the whole thing in one.

Q. Have you stated fully your reasons for changing your divisor?

A. Yes, sir.

Q. Who ever talked about dividing on the basis of ton miles and passenger miles, or making a ton mile equal to the passenger mile? Your statement simply negatives the propriety of doing that. Who ever suggested that being done? Did you ever hear of it being done?

A. In our discussion the other day I proceeded from your factor of train mileage as the ultimate production of your railroad system, and as therefore being the division upon which freight and passenger should be made; I proceeded to state that the ultimate production of the road was ton miles and passenger miles, and that as a passenger mile is not comparable or cannot be the same unit as a ton mile, we went to the common product of the two, which was the money involved for that division. We now come to a point where, as I said, the factor and the product is the same, viz., a ton mile, and, on Table 11, a passenger mile; and we therefore have used that for our division and not the gross-earning basis.

Q. Well, having entered into your reasons about it, I

would like to put this question to you. In most all of your weather-stress items, so-called, you attributed part to use and part to weather-stress?

A. Yes, sir.

Q. That which you attributed to the use you divided on a unit of use?

A. Yes, sir.

Q. 81-plus per cent for freight and 18-plus per cent for passenger?

A. Yes, sir.

Q. Now, those units you considered equal; that was your gross-weight-train-mile unit?

A. Yes, sir.

Q. So you had, then, a common unit, did you not? You were not doing business at all with ton miles as the equivalent of passenger miles, but you had made your train miles, passenger and freight, the one the equivalent of the other, had you not?

A. Yes, sir.

Q. And you held it was right and logical to divide the part of the maintenance account which you attributed to use on the basis of that unit because it was a just unit, as you held, though different from other units held by other authorities?

A. Yes, sir.

Q. Now, I want you to tell the Master the reason why you divided only part of the maintenance accounts between freight and passenger on use and here you divide all of the accounts upon use when you come to the division between state and interstate, unless it was to avoid attributing to the intrastate business the increased cost that would have been attributed to it had you consistently followed your basis of division of weather-stress items on revenue.

A. Such was not my intention, as intimated in the question, and I have fully stated, I think, the reason for this in my

answer just prior to this,—the reason for my making the, as you call it, change in the factor.

Q. And the same reasons apply to the change in the division on Table 11 of passenger cost between state and interstate?

A. Yes, sir.

Q. You consider ton mile less than carload the equivalent of ton mile in carload as a divisor of these maintenance items on your Table 7, or do you equate?

A. We equate in these accounts the switching movement only; we assume with reference to train movement that the division between inter and intra in less than carloads is equal.

Q. I was speaking of the maintenance accounts.

A. Well, the maintenance accounts to which this train movement is applied.

Q. That is, in dividing switching between state and interstate you assume that a less than carload load is five tons and that a carload load is thirty-five tons?

A. No, sir; we have assumed the switching basis on the tons moved.

Q. Yes; that is, the tons switched?

A. Yes, sir, the tons moved.

Q. And you multiply the less than carload by seven so as to attribute the proper proportion of switching expense to the less than carload business, don't you? You equate the tons? If you can't readily answer the question I will withdraw it and ask another one.

A. All right, sir. In the way it is asked I would have to go through the account right from the beginning.

Q. You know, do you not, that in the division of your maintenance accounts you did not equate the ton-miles as between less than carload and carload ton miles?

A. No, sir, I did not.

Q. And you know that in the switching expense you did, do you not?

A. In the switching I suppose I did, yes.

Q. And you know that the multiplier was 7 in making the equation, do you not?

A. Yes, sir.

Q. Now, look at your division of item No. 2 on Table No. 7; how did you divide it,—station agents, clerks and laborers?

A. We take from the Northern Pacific Railway report that $105,725.06 was for agents' labor; we find from reference to Table No. 4 that 11.094 per cent of this amount was chargeable to passenger, which leaves $93,996 to be accounted for as station agents' labor on the freight account. We take the statement from Mr. Gray's testimony in the preliminary case that the clerical effort for less than carloads is equal to the clerical effort in carload lots, notwithstanding the great disparity in the weight between the two accounts; that is, it costs more in the clerical effort to handle a less than carload of 20,000 pounds than it does a carload of 20,000 pounds, and that in spite of the disparity between the two weights (the amount carried in carloads and the amount carried in less than carloads) the clerical effort was fully as great for the less than carloads as the other; therefore, one-half of this amount was charged upon the relation existing between inter and intra in the less than carloads and the other half on the relation existing between inter and intra on carloads. The balance of the account was divided upon the handlings of the inter and intrastate business in the state of Minnesota, which assigned 57.37 per cent of the handlings to interstate and 42.63 to intrastate.

Q. So one of the factors for this division was Mr. Gray's testimony. Was it not his statement that the clerical work attending a ton of less than carload was equivalent to the clerical work attending a carload of carload business; and

was there not attached to the paper to which you referred in direct an exhibit stating that the clerical work per ton of warehouse freight was 4.82 cents, and that the clerical work for carload freight was 4.74 cents per car; was not that his statement rather than as you have given it? Well, if you can't remember we will pass on.

A. I couldn't remember, but I remember your quoting the figures 4.82 and 4.74.

Q. One related to a ton less than carload, and the other related to a carload.

A. Yes, sir.

Q. Would that make any difference in the correctness of that element in your divisor? Well, we will pass to the next.

A. My recollection of it is working out, on that basis of Mr. Gray's, a parity from these decisions. If I am incorrect—

Q. Mr. Gray's testimony will show what it shows.

A. Yes, sir.

Q. But unless the statement which I have made as coming from Mr. Gray and the one which you have made as coming from him are equivalent one to the other, then your result is wrong, is it not?

A. Yes, sir. I would be pleased, if that is wrong, to correct that portion, as really that is one of the cases where there is a data furnished which I do not find existing elsewhere.

Q. And then you make other divisions depend upon that one?

A. Yes, sir.

Q. In whole or in part?

A. Yes, sir.

Q. A great many of them, haven't you?

A. To a certain extent quite a number depend—station laborers,—No, sir, there is nothing else depends upon that excepting very indirectly.

Q. Don't 3 and 4?

A. Yes, sir, 3 and 4 as much as those first three items; 2, 3 and 4, enter into the proportions of other items below; where they are used it affects it.

Q. And then another element in this divisor was the relation of intrastate tons to interstate tons moved in the trains, was it not, derived from your Table 5, your supposititious table?

A. Yes, sir, derived from Table 5. I don't like the—

Q. The entitled-to table?

A. The entitled-to table.

Q. As you suppose the business would be entitled to move?

A. Yes, sir, the entitled-to table.

Q. And handlings was another factor?

A. Yes, sir.

Q. From the entitle-to table?

A. No, sir, they are not drawn from the entitled-to table.

Q. But from what you claim stuff was entitled to?

A. Yes, sir, drawn from the basic papers upon which this table was made up.

Q. Now, if Mr. Gray's testimony is as I say, there would have to be some sort of equating done, would there not, to make that division?

A. Yes, sir.

Q. And you didn't make any, did you?

A. I couldn't say off-hand whether I did or not. I satisfied myself at the time that it was equal clerical effort; I will have to look into that; I will take the time now or later, whichever you say.

Q. Now, look at items No. 3 and No. 4. If there be any error or want of justification in the division in 2, 3 and 4 are also wrong?

A. Yes, sir.

Q. Look at 5, switchmen and watchmen. You divided that on the basis of tons switched, taking into account the less than

carloads and multiplying it by 7, did you not?

A. Yes, sir.

Q. And your division was 72.42 for the interstate business and 27.58 for the intrastate business?

A. Yes, sir.

Q. But on the maintenance items you divided on the basis of ton miles without any equation and reached a percentage of 57-plus for interstate and 42-plus for intrastate?

A. That latter don't seem to be the basis.

Q. Well, I spoke it from memory. You gave it to me this morning, and we will not stop to correct it. The dividing of this item 5, switchmen and watchmen, assumes, does it not, that each ton of interstate freight had the same terminal service in this regard as each ton of state freight?

A. Yes, sir.

Q. Did you make any investigation to find whether that is true?

A. No, sir, excepting that it would naturally be the result of the switching, according to the number of tons.

Q. A carload of coal from Duluth to Bismarck is interstate; a carload of coal from Duluth to Cloquet is state; we will assume the same weight; as respects this item should the expenses in Minnesota be equal?

A. Yes, sir. The carload of coal to Cloquet would be put on the train at say Superior or Duluth; so would the car for Dakota; at the junction point, Carlton, we would assume a switching for the Cloquet car which would give it its second switching; we would assume another one at its terminus, which would give it its third. On the Dakota car it has one movement (which we have spoken of) at Duluth; it is readjusted at Staples, and readjusted again at Moorhead—as the yard stood then at that new point, Dilworth—at Dilworth, as it stands now; making three switchings for each of the cars.

Q. The same amount of watchmen, I suppose, at crossings?

A. No, sir; the longer run would require more crossing watchmen, flagmen.

Q. Your element is inaccurate, then, as far as the watchmen are concerned?

A. Yes, sir.

Q. Take two cars, one originating at Duluth and one at Superior, and both destined to Crookston; how does your tons moved work as a divisor of Minnesota expenses for switchmen and watchmen, item 5?

A. The movement would be the same.

Q. Expenses in Minnesota the same for switchmen and watchmen if one was loaded at Duluth and the other at Superior and both destined, we will say, to Carlton?

A. Yes, sir, they are treated as the same, and I would consider they would be practically the same,—would be the same, yes, sir.

Q. They would be the same?

A. Would be the same, yes, sir.

Q. The switching to the dock in Superior wouldn't count for loading?

A. The moving—

Q. Moving the empty in and a switchman going in with the empty and going out with the load at the coal-dock at Superior—there would be no similar service in Minnesota, would there?

A. That wouldn't enter into it at all. The movement at Superior would not enter into the matter at all. The movement would be after it struck Duluth; the movement of those cars from Superior over is made by switching movement, and the trains are then made up and they would put something in at Duluth and let it go on.

Q. Let us take the Duluth car; it would have to be switched at Duluth into the dock empty to be loaded, and after load-

ing it would have to be switched out, a very important and expensive service, as far as a carload of coal is concerned compared with the revenue, is it not?

A. Yes, sir, it would be moved from the dock out.

Q. Now, if it was loaded at Superior there would be no switching of it in Minnesota empty, would there, for loading, and no switching of it after loading into a train, and no similar service?

A. There would be a switching movement at Duluth.

Q. It would not go to Duluth at all, would it, to get to Carlton?

A. I supposed it was coming that way, sir, from your question.

Q. Oh, no.

A. From your question I supposed it was coming that way.

Q. No, it would start out to Carlton; what would it go to Duluth for? It wouldn't have to, would it, on the Northern Pacific?

A. No, sir; that would be the movement over the lower division.

Q. So there is a case where this divisor doesn't apply, isn't it?

A. The Duluth docks, you must remember, is treated as all interstate.

Q. Are the switchmen and watchmen at the Duluth docks all interstate?

A. No, sir, but in making the division the Duluth docks are considered to a large extent as an interstate item.

Q. We were talking of item 5, switchmen and watchmen. Now, if it is all interstate there is nothing to divide; this is a common item and we are trying to find a divisor for it.

A. Yes, sir.

Q. And your division attributed just as much expense to

the interstate car moving from Superior to Carlton, for illustration, as the intrastate car moving from Duluth to Carlton?

A. Yes, sir.

Q. One is switched for loading and switched after loading in the state, and the other is not. Now, do you believe, as a fact, that the expenses in the state of the two cars are the same?

A. They are not, no, sir.

Q. Then your divisor as applied to such business is wrong, is it not?

A. Yes, sir.

Q. Why didn't you divide this item on the basis of number of handlings as you did a part of the item of No. 2 in the state?

A. Because the handlings are the warehouse handlings, not the switching handlings.

Q. Why didn't you build up information like that contained in your handling information with respect to the switching in the state?

A. Because the data was not at hand for that purpose. It could have been worked out. And, for the reason that a number of these divisions are not heavy enough to pay for the work which it would entail; and this was one in the consideration that I did not consider that the amount would be of sufficient quantity to justify the work, and in a number of instances which you have quoted in this way where I say I did not do it, it was not done for that reason.

Q. Well, the switching expenses are very large expenses, are they not?—the whole, I don't mean item 5.

A. Yes, sir.

Q. But the whole switching expenses are very large expenses?

A. Yes, sir, quite heavy.

Q. And the criticism of this would extend to the whole amount, would it not?

A. No, sir, not to the whole amount; it would extend to a portion of the amount, such as you have quoted; how much of it I could not say off-hand.

Q. Look at item 8, telegraph expenses. You assume $43,365.06 of this due to train movement upon the basis of items 10 to 27, to "direct train movement expense," as you define it, and the balance was divided on the basis of tons moved and not on the basis of tons one mile. But in this instance you did not equate the tons as between less than carload and carload by multiplying by 7 as in the division of switchmen and watchmen, and when you divided this item between freight and passenger you used the combined results of the divisions of 2, 3, 5 and 9; now, I would like to have you give me the reasons, first, for taking the tons moved instead of ton-miles, for failing to equate by using the multiplier 7 as between less than carloads and carloads, and, next, for departing in this division between state and interstate from the method that you adopted in the division of the same item between freight and passenger which made the division on the combined results of the divisions of items 2, 3, 5 and 9.

The MASTER: I believe it is in the record, but will you state again what that multiplier of 7 refers to?

Mr. BUTLER: It is a fact in the case, without dispute, that less than carload freight moves in less number of tons per car than does carload freight. Mr. Hillman has, from some data that I do not now hold in mind, determined that there are, on the average, seven times as many tons in the carload freight as there are in the less than carload freight, and in certain instances where the number of tons moved is used as a divisor, he equates the less than carload with the carload tons by multiplying the less than carload by 7, the unit of expense probably being considered, that it is the movement of the car

without regard to the weight of its load. That is the way I understand it.

Mr. O'BRIEN: As I understand it, that is if it is desired to ascertain the number of cars moved, if it is found, for instance, that there were one hundred tons of less than carload freight and seven hundred tons of carload freight, it would, as a result of this equation, be assumed that the less than carload tons required as many cars for movement as the carload tons did, is that it?

Mr. BUTLER: Yes.

The MASTER: That is the way I understand it. That was the way of getting at the number of cars in less than carload lots.

Mr. BUTLER: It comes up in a number of different ways. This "equated tons," I think, as used in connection with this table, is a definite enough expression.

Q. Now, if you are ready to answer the question.

A. The reason, in the first instance, that the ton is used instead of the ton-mile on the non-haulage items, is that these items accrue upon the freight per ton and not upon the ton-mile movement, and that therefore they are divided between the tonnages of the two classes of freight. The telegraph expenses which are included in this are hardly in the nature of the service where I equated these items, and I considered, therefore, that the items were divisible upon the ton basis not equated. The next question, as to why I did not use 2, 3, 5 and 9 as the basis of this division between inter and intra, is that in the telegraphing concerning these matters we would suppose that the division between freight and passenger followed, as a general thing, the station service, the station supplies, switching and terminal operation as between freight and passenger. When we had come to the freight business, that does not depend upon those items, but depends upon the amount of freight moved, and we therefore took it upon the

number of tons of the respective freight as being the proper basis for that division. It might be stated in this regard that a ton of freight moving a large number of miles might require more telegraphing and telegraphic service than the freight moving a lesser number of miles, but as far as that portion goes, it was ignored in using the ton basis as the division for the balance of the expenses.

Q. Have you stated fully your reason for these elements of division?

A. Yes, sir.

Q. Your basis of division charges as much to a carload of sand moved from White Bear lake to St. Paul, assuming it to be 35 tons, as it would for seven cars of less than carload business of the first-class freight moving from St. Paul to Crookston, does it not?

A. Yes, sir.

Q. And, in your opinion, that is the fact, is it not, on the average, as a railroad man?

A. Where you quote specific instances of that kind you depart from the fact upon which a great number of these divisions are based, and that is that when you come to the average haul, the average basis, as between inter and intra, all of those inequalities of which you speak would naturally disappear.

Q. How?

A. From the fact that the telegraphic service is divided upon the tons; where there was a—

Q. By whom is it divided on the tons?

A. By me, sir.

Q. I am asking you to justify that and not give that as a reason for something.

A. Well, perhaps when I get through I may explain that. I didn't intend that to be a final answer, sir. Where there is a shipment of interstate freight, such as you have men-

tioned, it is presumable, on the average, that there would be a shipment of intrastate freight; that there would be these quantities of freight such as you mention, the sand coming down, which would be off-set by the carloads of freight moving out on the inter business, and on that general proposition of the equation of traffic it is based not on the supposition that a sand car is equal to the car moving up to Crookston.

Q. You have now stated fully your justification for applying a unit of division that would charge as much for the sand car from White Bear in here as for seven carloads of first-class less than carload from here to Crookston, have you?

A. No, sir; I have stated my reasons for dividing as I have done between the total inter and intrastate traffic. I have not attempted to answer the question concerning the movement of the car from White Bear to St. Paul, as against the seven cars of less than carload from St. Paul to Crookston. I am not answering that question, but I am answering the question as to the correctness of the division, in my judgment, between the inter and intra in the state.

Q. Does the average length of haul have anything to do with it?

A. As I stated a few minutes ago, that where that average length of haul enters into it (it does enter in slightly) I have neglected it, sir.

Q. The average length of haul of the interstate business in Minnesota is greater than the intrastate business in Minnesota, is it not?

A. Yes, sir, and I have considered that point as fully covered in what I have termed the train movement of the freight, which is divided on a basis which includes that, and that sufficient allowance would be made for that in that division.

Q. Does less than carload business require more telegraphing than carload business?

A. Yes, sir.

Q. Per ton?

A. Yes, sir.

Q. Per car?

A. Yes, sir.

Q. Then you ought to equate, oughtn't you?

A. I do not think it is necessary in this case, sir.

Q. Then if you follow the method in this division on the basis of 2, 3, 5 and 9 you would attribute more of this to the state business, wouldn't you?

A. I do not know, sir; I could not say without looking it up.

Q. If you had equated the ton-miles, you would attribute more to the state business, wouldn't you?

A. Yes, sir.

Q. If you took into account the average haul, you would attribute more to the state business, wouldn't you?

A. Yes, sir.

Q. So every element of your division here has the effect, has it not, of attributing more to the interstate business and less to the state business?

A. Yes, sir.

Q. Item No. 9, proportion of operating expenses of terminals,—I understood your direct examination to treat this item as a rental and to attribute almost the entire amount to the Minnesota Transfer property?

A. Yes, sir.

Q. There is no rental of the Minnesota Transfer, is there, and the proportion that the Northern Pacific pays for the operation of that plant is divided among the accounts, the same as any other item, and for a correct division of it it ought to be analyzed and divided as are the other items in the various accounts?

A. I think not, sir.

Q. Well, if it is true that it is not paid as a rent but that

it pays its proportion of each item of expense of operating the Minnesota Transfer railway should not each such item of expense paid by the Northern Pacific for the operation of that plant be divided according to the method that you divide its own operating expenses; if tons should be the division in its own, should not tons be the division in a similar element of the whole expense of the Minnesota Transfer right straight through—on substantially the same basis?

A. No, sir; while this matter of the payment for the use of a utility is under consideration, I have termed it a rental. Those bills, as I have said before, are frequently rendered, showing the amount of repairs of various kinds, often in quite a great deal of detail, but they are rendered as the element of use of that utility. Their statistics as regards train mileage, etc., do not enter into the general problem. If, therefore, that utility, whether it is termed a rental or a payment for its use, is hired for freight or passenger, it can be consistently charged to that account. When we come to the division between inter and intra we can take that on a basis of the conditions existing in that special terminal as it affects the Northern Pacific traffic, without going into the further details of dividing those items up into maintenance, etc., as you have suggested.

Q. What basis did you divide it on?

A. I took the clerical expense and divided it on the percentage of billing.

Q. What do you mean by that, what percentage? Give me the percentages.

A. I found from an analysis of the Minnesota Transfer shipments forwarded that 83.52 per cent of the billing of the Minnesota Transfer was interstate.

Q. And of the freight coming in?

A. The freight coming in I did not know, sir. I assumed that the freight going out was the criterion of that.

Q. Why? Why not take it both ways?

A. Because I did not happen to have it both ways, sir.

Q. It didn't make any difference?

A. I assume it did not, sir.

Q. Well, go on. What else did you do to make this division?

A. And the balance of the expense is divided on the carload basis in and out of the Transfer, 86.21 per cent inter and 13.79 per cent intra.

Q. Equated between carloads and less than carloads?

A. No, sir.

Q. Why?

A. I did not consider it necessary, sir.

Q. I know you didn't or you wouldn't have done it that way, but I want your reason for it.

A. I can't give any other reason than I did not consider it necessary in this case.

Q. No reasons for that conclusion. You were trying to get at a proper, accurate, fair, just and scientific method?

A. Yes.

Q. Now, when I ask you why you selected a method it is not an answer to that for you to tell me just because you didn't feel like it or because you didn't think so, if there is any reason for it.

A. Well, the carload basis going in and out from Minnesota Transfer is a fair basis, for the reason that we can trace those carloads whether they are inter or intra. The less than carloads are mixed lots, in and out; that is, there will be inter and intrastate in the same car; and, for that reason, I discarded the l. c. l. shipment, and treated it as going out the same, and treated it as if it was divided upon the same percentage of 86.21 inter and 13.79 intra, and used the carload only as the basis for that division.

Q. Did your entitled-to table assume carloading as containing both kinds of freight, state and interstate, or did

your entitled-to table assume that they would only put interstate in a car or state in a car?

A. It assumes nothing in reference to that at all, sir.

Q. But you do separate, do you not, between state and interstate there?

A. In less than carloads?

Q. Between state and interstate in less than carloads.

A. Yes, sir.

Q. How could you build an intelligent entitled-to table without determining whether or not there would be state and interstate business in the same car? you say there is, as a matter of practice.

A. When a shipment moves from a point in Minnesota, either out or in the state, in less than carloads, the initial point will be either a divisional point (I mean a division terminus) or not; if it is not a divisional terminus, that freight, as recorded in Table 5, will move from that point to the first division point and be entitled to local movement. If it from that next divisional point passes entirely over a division, it will be entitled to a through movement for that number of miles. If, on the other hand, its next movement from the divisional point which it reaches is only over a portion of a division, it is entitled only to a local train movement. It is on that basis that Table 5 is made up. It does not matter whether the shipment, the inter and intra, were in the same car or in different cars, it is the movement to which it was entitled, and that is the basis of Table No. 5.

Q. Does the Minnesota Transfer Company perform the same function in the business of the Northern Pacific Railroad as one of its own freight stations?

A. Yes, sir, jointly with others.

Q. It does the same work for that Company, does it not?

A. Yes, sir.

Q. It does all kinds of freight-stational work, does it not,

for the Northern Pacific?

A. Yes, sir.

Q. And you attribute to the interstate business 83 per cent of the cost?

A. Yes, sir.

Q. Does that correspond with your division for the stational expenses of the Northern Pacific at its own stations?

A. No, sir, that is a little heavier.

Q. So if you divide the cost of this function out there on the same basis as you divide the cost of similar functions elsewhere, you would attribute a greater expense, would you not, to the intrastate business?

A. Yes, sir.

Q. That was not the reason why you adopted a different method of doing it, was it?

A. No, sir, as I have stated before.

Q. Don't you think it would be a good thing,—now take that freight station out there, the total expense to be divided between state and interstate—to divide that on a basis of the average of all the rest in the state, the cost of doing similar work?

A. No, sir, I think not.

Q. You think, for some particular and peculiar reason, taking into account only the outgoing freight and not the incoming freight, neglecting to equate as between carloads and less than carloads, ignoring cars having both kinds, state and interstate, in them, which happens to give you a figure far in excess of the percentage charged to the interstate business in other things, that that method is just, do you?

A. Yes, sir; I think the method I have used is just in this respect. You will recollect, possibly, the number of discussions we have had on this point of the use of a distinctive terminal where the statistics do not enter into the other part of

the state work and of the proper use of that utility which is a rented one in its own self.

Q. It would be very easy to divide on the basis of the division of the other stational service items, would it not, without regard to train mileage statistics? just leave these aside until you had made your division of your other stational items and then divide these on the basis that you couldn't get a better one; then you would be treating the two classes of business at the Minnesota Transfer the same as you did where similar service was rendered at other stations, would you not?

A. Yes, sir.

Q. Wouldn't that look fair to you?

A. I have already answered that question, that I have considered that matter in reference to the rental of a terminal for a specific use, and that I still think that the method assumed is the proper one.

Q. And you think that dividing it on the same basis as you divided the cost of similar work elsewhere would be fair or unfair?

A. As the matter stands, I think it would not be fair.

Q. For the reasons you have so fully stated?

A. For the reasons I have stated.

Q. You think that the item of station agents, clerks and laborers at the Minnesota Transfer should not be divided between state and interstate on the same basis as that item had been in St. Paul at their freight house?

A. No, sir, it should not be.

Recess until 2 P. M.

AFTERNOON SESSION.

Q. You make one division of all the items from 10 to 27?

A. Yes, sir.

Q. You just took a total of them and then used your method for division, or did you divide each separately?

A. I divided each separately, sir.

Q. It would be the same thing as if you added them all together and applied your percentages?

A. Yes, sir.

Q. What are the percentages?

A. 82.334 inter and 17.666 intra.

Q. Is that a division between local and through trains, or between interstate and state?

A. Between interstate and intrastate. Of course, you understand that the fact of the amount of traffic of each character entitled to a haul upon a through or local train enters into that factor.

Q. The data in your Table No. 6, derived from the train-sheet statistics referred to this morning, is a factor there?

A. Yes, sir.

Q. And if inaccurate in any regard, that affects the result?

A. Yes, sir.

Q. And Table No. 5, the entitled-to table, is also the factor, indeed and corner-stone of this division, is it not?

A. It is the basis of Division D of this amount, yes, sir.

Q. But in getting the division of these items between state and interstate, that is an essential factor?

A. Yes.

Q. Now, one of your tables shows that only about 14 per cent moved on local trains; that is the table derived from the train-sheets on the reports of conductors, and the other one shows that more than 25 per cent were entitled to move on local trains?

A. Yes, sir.

Q. Items 10 to 27, which you have characterized as train-movement items, include the cost of switching, except that portion of it which is covered in the switchmen item in account No. 5?

A. Yes, sir, they include what may be termed the engine expenses of switching.

Q. The switch-engine proportion of those items aggregates about a half a million dollars per annum, does it not?

A. It would be in the neighborhood of that, yes, sir.

Q. One of your tables (I think it is Table 3) shows where the switch-engine miles are made, does it not?

A. Yes, sir.

Q. And it is nearly all made on the main line, isn't it, or terminal divisions?

A. Yes, sir.

Q. There is none of it on the branches, practically; it is negligible, isn't it?

A. No, sir, it is smaller with reference to the total than the other—

Q. Very much, isn't it?

A. —but it is not a negligible quantity.

Q. No, but it is very much smaller relatively, isn't it, than the other?

A. It is not very much smaller. I can tell you that in just a moment.

Q. Well, we will go on; I can't stop to figure because I want to hasten along. The table shows what it is?

A. Yes, sir.

Q. You use the local train cost on the branch lines as the criterion of the cost for the main-line local trains?

A. Yes, sir.

Q. You don't apportion or allot any part of the main line switching cost to the branch lines in building up your branch line cost, do you?

A. No, sir.

Q. You told us, did you not, that the switching accrued to all of the road and that is the reason the switch-engine mileage should be used as an element for division of all of

the matters that it was used as an element to divide?

A. Yes, sir, between freight and passenger.

Q. Between freight and passenger, and you also told us in that connection, that if you were comparing cost on a branch with the cost on the main line that it would be arithmetically unsound and utterly absurd not to distribute some of the main line and terminal switching expenses to the branch, did you not?

A. I was very careful to avoid the adjective "absurd."

Q. But that was a case where you admitted it in that very language?

A. I admit that I stated that it should be taken into account, sir.

Q. And now when you are building up the relation between your branch-line cost and your main-line cost, you do not attribute any of the cost of the switching in these great terminals, at Duluth, Superior, Minneapolis and St. Paul, to the branch lines at all, but that whole item, in so far as the mileage indicates what it ought to be according to your Table 3, is charged to the main line cost, is it not?

A. Yes, sir, and so far as the fuel and what you might term the engine expenses go, yes.

Q. That is, of this half a million dollars per annum of the switch-engine mileage, there is just 6.7 per cent of the total switch-engine mileage shown on your Table No. 3 to have been done on all of the branches in Minnesota of this Company?

The MASTER: Done on the branches?

Mr. BUTLER: On the branches.

WITNESS: And the total train mileage—

Q. No, the switch-engine mileage.

A. Yes, sir, and what relation of the total train mileage to the branches?

Q. No, I asked you if that percentage of the switch-engine

mileage on the branches to the rest of the road was not 6.7 per cent of all of the switch-engine mileage.

A. That I do not know without figuring it. I suppose your figuring is correct; and, in turn I would ask you the question if you had, while you were figuring that, figured the percentage of the total mileage on the branches.

Q. No.

A. It would not be complete without having that figure.

Q. So that, in the establishment of your relation, there is about half a million dollars per year for switch-engine service which you have attributed to the whole line in your divisions between freight and passenger, and when you come to make up the relation of branch cost to main-line cost, you do not distribute it at all, but only include in your branch-line cost 6.7 per cent of that mileage, which is over 30 per cent of all the engine mileage made in Minnesota?

A. That is the relation of it (I assume it is correct, the 6.7 per cent described) the relation of switch mileage performed on branch lines to the total switch mileage.

The MASTER: In the state?

WITNESS: In the state.

Mr. BUTLER: In the state, yes, sir.

WITNESS: Now, sir, in order to make that a complete factor, in order to determine how much it would disturb the factor, we would have to determine the relation of the branch-line train mileage to the total train mileage, which has not yet been done.

Q. I wasn't asking you for the amount of the error, but asking you for the fact of the error.

A. You assign a percentage which would indicate that the amount was very heavy, and before I would admit the heaviness of it I must examine the other side of it.

Q. Now, when I asked you to define your train-movement expenses you told me that it did not include switching but

was the cost of moving freight in cars after the trains had been made up; in like manner the cost of moving passengers in passenger cars after those were made up. That you told us, some days ago, and that is your understanding of train movement cost, is it not?

A. Yes, sir.

Q. But now in this division here, on your basis of train-movement cost, you have included a half million dollars that does not belong there, and of that half million dollars you have allowed to the branches 6.7 per cent?

A. Yes, sir.

Q. Now, I have written out a statement of my understanding of how this division is made, and I wish you would give it attention to see if I am right, that I may ask you a question on it. These items 10 to 27,—your so-called direct train-movement cost—includes the cost of switch-engine service as well as the haulage in train cost?

A. Yes, sir.

Q. Table No. 6,—in building up the relative train-movement cost for the state business as compared with interstate business, you took the ton mileage from the statement that you have designated as "A. S. & M. A. No. 5," subdivided as between main line and branch lines within or touching the state of Minnesota?

A. Yes, sir.

Q. You then drew off the total of freight items 10 to 27 from your tables No. 1 and No. 2 for the main line and for the branches separately?

A. Yes, sir.

Q. Then by dividing the ton miles of the branches into the branch line expenses you arrive at an average train-movement cost on the branch line business of .2142, and by proceeding in the same method you found the cost of the main line .13277?

A. Of the through train on the main line, yes, sir.

Q. That is all trains, isn't it?

A. No, sir.

Q. Sure?

A. Yes, sir. I beg your pardon, what was the figure you quoted?

Q. .13277.

A. Yes, sir, that is all trains.

Q. That is my understanding. You then proceeded, in Division C of Table 6, to segregate the main-line local train ton-miles and main-line local train-movement cost on the basis that you had found for the branches, arriving at a cost per ton per mile for the ton mileage carried on through trains of .1189 as against .2142 for ton mileage carried on local trains, or in the relation of 180 for the local train as compared with 100 for the through train?

A. Yes, sir.

Q. You then, in Division D, took the ton mileage in accordance with the entitled-to movement as indicated by your Table No. 5, and proceeded to set up the equated cost as between the state and interstate business, being for the state 1.4393 as against 1.1676 interstate business, or in the relation of 100 for the interstate business as compared with 123.27 for the state business?

A. Yes, sir.

Q. And also indicating a proportion of the expenses referred to of 17.666 for the state business as against 82.334 for the interstate business?

A. Yes, sir.

Q. Now, I want you to tell, if you can, at some future time, (I know you can't now) what the effect on all these factors and upon your conclusions the omission of the switching engine mileage cost would have.

The MASTER: On the branch line?

Mr. BUTLER: On all.

The MASTER: That is, through on all?

Mr. BUTLER: It is mostly all included in the main-line cost.

Q. And by that I mean that the switching cost for the firemen, the engineer, the fuel, the lubricants, should be treated the same as the rest of the switching cost in No. 5, which includes the switchmen who follow the engine. Do you follow me?

A. Yes, sir.

Q. You can see, can you not, from the figures, that it would very greatly increase the cost attributable to the intrastate business?

A. No, sir.

Mr. DURMENT: I think that question shouldn't be answered at this time.

WITNESS: No, sir, I can't see that, for the reason that the figures that you have spoken of have omitted the factor of the total relation of the branch-line train miles to the main-line train miles, and inasmuch as that figure would exceed the 6.7 per cent which you mention it would affect the matter.

Q. Is train miles a factor in this division?

A. I—

Q. Now, honest, is train miles a factor in this division, as you have made it?

A. I should have said switching miles in relation to the total engine miles. As you have compared switching mileage on my branches to the total switching mileage, it would be necessary for me, in order to determine whether that was correct or not, to use the relation also between my total branch-line mileage and my total train mileage in order to determine whether or not I had made a serious error in including this amount in the train-movement costs.

Q. It may change the result, but you can't tell which way?

A. I can't tell exactly.

Q. It is certain to change it, though, isn't it?

A. It probably will, yes, sir.

Q. Did you realize, when you were making that division that you were doing it as you did do it, including a half a million dollars cost for the switch-engine movement and not attributing it to the branch at all except as some switching-engine mileage apt to have been made on the branches amount in the aggregate to 6.7 per cent?

A. I didn't consider that matter in making it.

Q. Did you when you were taking these items from 10 to 27 realize that it included the fuel and cost of the switch engines, or did you overlook that?

A. I made a number of computations at that time concerning this matter, and whether I overlooked it or found a reasonable parity of the relations I do not know without examination.

Q. Well, do you think it defensible to do as you did, as a matter of accounting?

A. I will have to say about that if I took that matter into consideration I considered it defensible. If I overlooked it it is not defensible.

Q. If that definition of train-movement cost is right, when you exclude the switch-engine-mileage cost and when you are building up a relation between the items making train-movement cost on the branches as compared with the main line, it would certainly be indefensible, would it not, to include all of the switch-engine mileage, either on one side or the other? That is plainly so, isn't it?

A. If you are using the figures which you obtained for the absolute purpose of determining the train cost pure and simple, yes, sir.

Q. That is what you were doing, isn't it?

A. If you are including in that, as you have, from the expenses being all together here, your switching movement and the relation of that switching movement on your branch line

and on your main line was practically the same to the total movement, it would be perfectly correct for you to treat it in the manner that I have.

Q. I asked you whether it would not be manifestly and plainly wrong to include all the switching cost on either side, either the main-line side or the branch-line side. Do you not agree with me and answer positively that it would be wrong?

A. Yes, sir, it would be.

Q. Ton-miles is the term in which you express this relation of cost, is it not, cost per ton-mile?

A. Yes, sir.

Q. Ton-miles are produced by multiplying the weight by the distance in the route, are they not?

A. Yes, sir.

Q. Any amount of switching does not affect the number of ton-miles, does it?

A. No, sir.

Q. Then engine-miles or train-miles, or car-miles, or anything else except ton-miles, is not a factor in this division at all, is it? as shown by your Table 6—which was made for this very purpose?

A. No, sir, the ton-mile is the basis there.

Q. Switching mileage in combination with ton-miles is not usually employed as a factor for anything, is it?

A. No, sir, they would have to be reduced to some common denominator before they could be used.

Q. Now, from all this can you now recall whether or not you inadvertently included this large item of switching cost in the train-movement cost, or whether you did it maturely after giving it such consideration and reflection that you felt that it was justifiable to do so?

A. No, sir, I can't recall without my notes. I should say, off-hand, from the fact that none of that computation happens to remain in my head just now, that it was neglected, but I can't

tell that without looking, as I made a large number of computations from which I let the results go without retaining figures.

Q. It is your impression that it was wholly overlooked?

A. That is my impression at present until I look at my figures.

Q. Well, unless the attributing of 6.7 per cent of all this switch-mileage to the branch cost turns out to be right, it destroys the value of this division totally, does it not?

A. It affects the results, as I have stated before, yes, sir.

Q. The including of this switching as you did, is quite inconsistent with your use of the switch-engine mileage as you used it in connection with other mileage, train or engine, in the division between freight and passenger, is it not, because there you insist that the whole railroad is a unit and that the switching mileage at St. Paul is to be attributed to the whole line, which would be used as a factor for dividing between freight and passenger the cost of a fence up at St. Vincent?

A. Again you mistake the unit which is under consideration. The determining unit here is the division between through and local trains and inter and intra. You there have to, you might say, split your state as a factor,—

Q. Yes, that is what I thought.

A. —because on certain branches you run local trains and local only. It is the only basis that you have got for the establishment of your local-train cost, and we can hardly compare two matters where we are compelled to use different units of division.

Q. Now, when you are also making your computation to see if it is right, will you also take into account (I think I asked you to) a division of the switching cost on the same basis as you divided the switchmen in item 5? (Witness makes notation.) I mean switchmen as segregating from the watchmen.

A. You asked me to make this examination on a prior day, did you?

Q. Yes.

A. I have a memorandum to use 23.44 per cent, which is that percentage.

Q. You divide item 29, damage to property,—30, stock killed and injured,—31, personal injury,—32, wrecking,—on ton mileage basis, the ton mileage being derived from your entitled-to table No. 5?

A. Yes, sir.

Q. These items all depend upon train movement, do they not, practically?

A. Yes, sir.

Q. Then would it not be consistent with certain of the rules that you have laid down and applied in this examination to divide these items on the basis of the division of the train-movement expenses?

A. No, sir; for the reason that while the train is moving those expenses accrue according to the movement of the train and not according to the amount of expenses which the train bears in its movement; and that in this movement of the train the product is a certain number of ton-miles of each class of freight and that, therefore, this train movement expense is divisible upon the basis of the respective tonnages produced and not on the basis of the expenses which have preceded it.

Q. That same statement would apply, would it not, to many other items where you have not used the ton-mileage basis?

A. I do not know of any such that it would.

Q. Items 10 to 27 are divided on train mileage equated, aren't they, and the reasons you have just given make that a good basis?

A. These figures which you have mentioned, 10 to 27, are the basis of producing the figure which I have quoted of 17.666, and therefore are the proper division; they enter into that in the production of the factor upon which you might say they were divided.

Q. Yes. Why not use the same percentages for those and the percentages arrived at by equating the ton-miles?

A. For the reason already stated that the equating of the ton-miles does not enter into this per cent at all.

Q. Why?

A. For the reason that these items that you have mentioned, 29, 30, 31 and 32, accrue not on the basis of the expense of a train movement, but on the train movement itself; not on the basis of the expenses, but on the train movement itself; and therefore the product which that train movement makes—which is the ton-mileage inter and intra—is the factor for the division, and that factor is 14.826.

Q. Would a train of less-than-carload-lot cars be any other or different as respects these items 29, 30, 31 and 32, as a practical matter, than a trainload of fully loaded cars?

A. The damage is just as apt to occur on one as the other.

Q. Now, if it is true or should turn out on investigation to be true, that the intrastate business was all less than carloads and the interstate business was all carload, then a division of these items on the basis of ton-miles would not attribute enough of the expense to the intrastate business; am I right?

A. The matter there,—if we could—that would be a pretty difficult matter to figure out, Mr. Butler.

Q. It would, eh?

A. Yes, sir.

Q. You have told me that in less-than-carload-lot in a train would be just as liable to produce the damages as a carload-lot train?

A. Yes, sir.

Q. And we have also understood that in the tons moved or ton-miles produced, the relation of less than carload to carload is 7 to 1, haven't we?

A. Yes, sir.

Q. Now, if your first answer is right and our second as-

sumption is right and all the intrastate business was less-than-carload-lot business—if that were the fact, a division on this ton-mileage basis would attribute too little to the intrastate, would it not? Isn't that clear, without any computation or reflection, from what has just gone before it?

A. Yes, sir, that is right.

Q. Now, if more than half of the business involved in your local trains—if there were more intrastate less-than-carload-lot business than there is interstate less-than-carload-lot business, the same statement would be true, only differing in degree, isn't that all?

A. Yes, sir.

Q. So that ton mileage equated would be a better factor, would it not, than the straight ton mileage equated at 7 to 1?

A. No, sir, I think between the two I should stick to the ton mileage that I have given.

Q. For the reasons that you have just given me?

A. You are quoting extreme cases on that, and you must remember that in this data while these accidents are liable to happen—might happen entirely upon—

Q. Is that an accident?

A. They are the results of accidents, they are all what are called "loss or damage" cases, which are accidents.

Q. I misunderstood what you referred to.

A. Yes, sir. Are accidents; that damage is liable to occur on your full trains or on your local trains, and on your cars in carloads and less than carloads, and without following those factors through as to their loading, I should think, and do think yet, that the proration of that on the straight ton-mile basis is the best factor.

Q. That is, you think that one car of grain with 35 tons in it from Crookston to Minneapolis should bear just as much out of these four items—damage to property, stock killed and injured, personal injury, wrecking—as seven cars of less than

carload, first class merchandise from Minneapolis to Crookston, because they will produce exactly the same number of ton-miles as did the single car of grain in the other direction?

A. You are coming to the same factor again that you did this morning, Mr. Butler,—

Q. Now, doesn't your—

A. —which—

Mr. O'BRIEN: Let him answer.

Mr. BUTLER: Well, he is not answering. Let me make my question clear.

Mr. O'BRIEN: Well, I think he is answering it.

Mr. BUTLER: It is manifest that he was not going to answer. I want to ask him if his division does not do that thing; I am not asking him whether it ought to or not but if it does do that thing.

Mr. O'BRIEN: I think the witness ought to be allowed to answer and finish his answer.

The MASTER: That is right, but perhaps this further question may enlighten the witness.

Mr. BUTLER: I don't want to go into the reasons of all this, but I want to know if it does that thing.

WITNESS: Your Honor, you understand that the reason I answer as I do is that on my doctrine of averages, upon which this is set up, asking a question of that kind, which is an extreme case, and asking me if I do not make that equal—I can't answer that question unless I restate my doctrine of averages, without allowing that to stand, that I am putting that basis up, and that is the reason that I answer in the way that I do.

The MASTER: What I was going to suggest is, if you comprehend the question, just exactly as he puts it, that you answer it just as he puts it and then make your explanation, and you will be allowed to do it. That is, answer it on his theory and go on and make your explanation, right then and there, after the question is answered. That is satisfactory, isn't it?

Mr. O'BRIEN: Yes, sir, perfectly.

Q. Your method of division of these four items would charge as much for one car of grain containing 35 tons from Crookston to Minneapolis as it would to seven cars of l. c. l. merchandise going in the opposite direction and between the same points?

A. Yes, sir; for the reason that I have stated, that I consider that on the doctrine of averages, which we take as being the proper basis for this general division; and the case you quote is one of the extreme cases which is included in the basis on which I have assumed the averages but is not typical of the traffic at all.

Q. Grain movement is very typical of all traffic, is it not, and so is coal movement, both state and interstate, on the line of the Northern Pacific road in Minnesota?

A. There is a large amount of each character of freight, sir.

Q. And the number of ton-miles of such commodities produced in this state is relatively very great and compares with the number of ton-miles that usually moves in the first four classes in less than carload lots?

A. Yes, sir.

Q. Now, there is a doctrine of averages, is there, that on the traffic of the Northern Pacific as it moves here, it will balance up that condition of affairs?

A. Yes, sir; I consider the ton-mileage a satisfactory division for that.

Q. I know that, but the doctrine of averages is what makes it so; it is not any specific observation of it that we could make, is it?

A. That we have made, no, sir.

Q. Car mileage, item 33, is divided on the ton-mileage basis, is it not, multiplying less than carload ton-miles by 7 to equate with the car?

A. Yes, sir.

Q. Why does not the doctrine of averages make the ton-

mileage basis there the proper one without equation? The use of cars is quite intimately connected with the four items that we were last speaking of.

A. Because in this car mileage, which is practically the rental of cars, the cars have their specific uses, and therefore the difference between that and the items which have gone before, from the very nature of the item, would, to my mind, render the use of what we call the equated tonnage the proper basis for division.

Q. On the use of cars that happened to be rented from other companies the division should be 7 to 1 as compared with the amount attributable to the other four items resulting from train movement—29, 30, 31 and 32—one being the straight ton mileage and the other the equated?

A. I will say no to that question, as I understand it.

Q. Now, item 33, average haul, state and interstate, is different. The amount of free time to which shippers are entitled is the same, presumably more time consumed by a car to make a short haul (that is, per mile of haul) than to make a long haul. Now, in dividing between state and interstate, when one is longer than the other, shouldn't that be taken into account, or will that come around all right on the doctrine of averages?

A. No, sir; in treating this we have not taken into account in this all the use of the equipment and we have treated this as an expense, the same as any other expense which has been incurred.

Q. That is the reason that the length of the haul should not be taken into account—because the expense is the same as any other expense that has been incurred; is that the reason?

A. It is an expense which has been incurred, and as we have not in this division of expenses taken that into account, (that is, the average haul, average time consumed, and all that, by the equipment) in this use we do not take it into account here, it is an expense, and this car would take the

place of some other car, and so on, which would be owned by the Company; therefore it is treated as an expense on the equated ton-mile basis and not taken into account as the average haul, and an attempt made to equate the haul as well as the ton-mile.

Q. But your damage to property resulting from the use of a free car so rented should be divided on the unequated ton-mile basis?

A. Yes, sir, certainly; the use is entirely different of the two items.

Q. 35, superintendence,—38, other expenses,—39, stationery—these are divided on the basis of all of the other accounts under the general head of conducting transportation?

A. Yes, sir.

Q. So if there are any errors, or if the Court should be of opinion that the divisions which you made are inaccurate, that will affect the division of these?

A. Yes, sir.

Q. 45, repairs of freight cars, divided by you on the basis of equated ton-miles; is that right?

A. Yes, sir.

Q. Interstate business has longer haul than state business, it appears in proof; now, let us assume, for the purpose of the example, that it would require twice as many cars to produce the same number of ton-miles in the state business as it would in the interstate business; by reason of the length of haul and the time consumed in loading and unloading, do you think that an element which should be taken into account in dividing the cost of maintaining the cars?

A. If there were any method of determining the amount of repair which should become necessary to a car by reason of its standing on a siding waiting for its load as against the amount of repair which it requires from its time in earning its load in its running, then by that much (whatever that factor

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was) we should increase according to you might say its idle time or its average haul. The fact of using the ton-mile basis outside of the element of what wear there comes through time equates that difference in the length of haul.

Q. But a car plying between here and White Bear lake, we will say, for example, to make it a sharp example. would have to be loaded and unloaded and switched for loading and unloading a good many times to produce the same number of ton-miles as a car that would go from here to Crookston, would it not? And having called your attention to that, I want to ask you whether you think your illustration of computing the damage to an idle car standing on the sidetrack meets that situation.

A. There is an element of damage to a car, undoubtedly, which accrues in the number of times that that car is handled and switched. The main part, or a large portion, however, of the repairs of cars is due to the number of miles which it makes, and in making the miles the car produces the ton-miles, so, as far as the larger portion of the repairs of cars comes in, the car-mile basis covers it exactly.

Q. The car-mile basis?

A. I mean the equated ton-mile basis.

Q. If the loads are equal?

A. Yes, sir.

Q. And that is assumed?

A. Yes, sir; and there is very good ground for the assumption. The switching of these cars would be the principal difference in them,—what damage would accrue from their switching. In making the Crookston run from St. Paul, (I forget the number of miles, I think it is about 267) we would have on that car, for a full carload, four switchings.

Q. Running it through on through trains?

A. Yes, sir. From here to White Bear we would have, for the same mileage, eight switchings, which would be double

the amount of switching on that basis; and in so far as this extreme example which you have quoted goes, the damage which accrues to a car from its being switched would be practically doubled in making its ton-miles from here to White Bear that it would from here to Crookston.

Q. Well, should not the length of the haul be taken into account?

A. If my recollection of the White Bear haul was thirty miles, I take it—

Q. I am now speaking generally. Don't you think that the length of the haul ought to be taken into account in dividing the cost of maintaining cars between long-haul business and short-haul business, state or interstate business?

A. We have taken that into account in our ton-mile basis.

Q. The length of the haul?

A. The length of the haul. Where I say that we have neglected it is in the number of switchings which it *might* take one car more to make than the other.

Q. Do you think the factor of free time an element at all that ought to be taken into account—that the law gives them?

A. What factor?

Q. Free time that they are entitled to to load and unload.

A. Not as far as this account goes, no, sir.

Q. You don't think that weather-stress has anything to do with the maintenance of freight cars—

A. Oh, it has.

Q. —of the lapse of time for the standing of cars around on the sidetracks waiting to be used,—waiting four days to be used one?

A. There is an element of weather-stress, but in the main the repairs of the freight car are due to its use, sir.

Q. Item 47, repairs of locomotives. I understood you in your direct testimony to say that 18.1 per cent was spent for the repairs of switching locomotives and that you divided that item

on the basis of carloads; am I right?

A. Yes, sir, the percentage of repairs of switch engines to the total repairs of freight engines was 18.1 per cent.

Q. You divided that on the basis of carloads, did you not, state and interstate?

A. Yes, sir. The repairs to switch locomotives on the basis of tons handled.

Q. Carload tons handled?

A. Yes, sir, carload tons handled.

Q. And that was derived from your Table 5, your entitled-to table?

A. Yes, sir.

Q. Then you divide the item of switchmen on the basis of the tons moved equated?

A. Yes, sir.

Q. There is a good reason, I assume, for dividing the repairs of locomotives on the basis of carload tons involved, and dividing the pay of the switchmen who tend the locomotive on the basis of equated tons, and dividing the fuel and oil used for the operation of the locomotive on still another basis, in the problem of getting at the state and interstate cost?

A. Yes, sir.

Q. It would be wrong to divide the fuel and firemen's pay on the same basis as the switchmen's pay, would it, or upon the same basis as repairing a locomotive?

A. The repairs of the locomotives do not necessarily follow the pay of the men that have them in charge, or the amount of fuel which is burned in these locomotives. They bear a more close relation in this respect to the tons which are handled, which you might say represent more closely the switching movement. If we had the basis of the number of cars handled, inter and intra, on this basis, it would be a better division, but we haven't that, nor can it be obtained from the records which

we have, and therefore you are compelled to come to the basis of the tons handled. I understand that in this—

Q. That tons handled divides the cost of the switchmen?

A. Of the switching, yes, sir.

Q. But carload tons divide the cost of repairing and something else equated, ton mileage that we have talked about in the division of 10 to 27, divides the pay of the fireman and engineer; don't you think that it would be proper to divide the pay of the fireman and the engineer on the switching engine on the same basis that you divide the pay of the switchmen, or is there a good ground for difference?

A. We are now going back to those other accounts, leaving this repair of locomotives, I understand, going back to where we were before?

Q. Yes, for this reason, repairs of switch locomotives you divide on a carload-ton basis?

A. Yes, sir.

Q. The switchmen you divide on the tons moved equated basis; the fireman and engineer you divide on another basis included in your items from 10 to 27, this long matter that I read here a short time ago. You have told me a reason for distinguishing the repairs of the locomotives from the switchmen; now, I want to know if there is a reason for distinguishing between the wages of the switchmen and the wages of the firemen.

A. No, sir, as I stated, they should be divided on practically the same basis.

Q. You used a different basis, did you not?

A. Yes, sir; as I explained at the time that it would be necessary for me to go into that detail to determine whether or not I had equated that matter before I assumed the switch-engine mileage included in those items as being properly equated or not.

Q. 49, other equipment expenses,—50, supervision of equip-

ment,—51, stationery and printing,—you divided on the basis of the results of the divisions of the preceding accounts under the maintenance of equipment?

A. Yes, sir.

Q. So that any change ought properly to be made in any of these other accounts under that head, to-wit, 45, 46 or 47, would affect 49, 50 and 51?

A. Yes, sir.

Q. Maintenance of ways and structures, removal of snow and ice,—you divided this item the same as you did the repairs of engines, considering 18.1 per cent of the repairs of engines attributable to switching and 81.9 attributable to road service, divided on the basis of straight ton-miles, and the switching divided on the basis of carload tons; is that right, do I understand that division right?

A. Yes, sir.

Q. What relation has the repairs of locomotives to the removal of snow and ice? Does the cost of removal of snow and ice follow the cost of repairing locomotives any more than it does the repair of office furniture?

A. I have taken 18.1 per cent of the freight movement as the amount of the switching movement in relation to the movement of the engines on the main line, and handled that 18.1 per cent on the basis of the tons handled, and the balance upon the ton-mile basis.

Q. Is that the same as you divided repairs of locomotives? You used the same percentages attributable to switching and to the main-line service, and I thought you divided each percentage or portion or part of the snow and ice as you did the repairs of locomotives.

A. Yes, sir, I have made the same division.

Q. Is there any relation between the cost of repairs to locomotives and the cost of removal of snow and ice?

A. The factors entering into that are such as it brings the same basis of division.

Q. Is there any relation between the two, or is it a mere coincidence that the same factors happen to be divisors?

A. Well, it is practically a coincidence that the 18.1 per cent happens to indicate the use of the switching locomotive, and that therefore is the factor upon which that snow and ice—

Q. Snow and ice?

A. —is divided; and that the balance comes on the train miles, the 18.1 per cent being the factor which is indicative of its use, rather than having a direct relation to the repairs of locomotives.

Q. Indicative of what use?

A. Of the use of the switching locomotive as against the main-line locomotive.

Q. I know, but why should that be picked out to divide the cost of removal of snow and ice or to separate it before a division? That is what I am trying to get at, and then why should you use precisely the same method of removing snow and ice from the track as you do for repairing locomotives? I have failed to understand your statement of the connection, if you did state one. Well, we will withdraw that question and pass on. 57, repairs of roadway and track,—60, repairs of bridges and culverts,—61, cattle-guards, road-crossings and track-signs,—62, renewal of rails,—63, renewal of ties,—64, renewal of fastenings,—65, renewal of frogs and switches, etc.,—67, repairs of fences,—68, repairs of snow fences and snow sheds; these items, to-wit, from 57 to 68, inclusive, were divided on the same basis as you used for dividing the cost of removing snow and ice?

A. Excepting the item 66, yes, sir.

Q. I didn't read 66, did I?

A. You stated an inclusive number there.

Q. And the divisor of all these accounts not based on some unit or combination of units of use, are they not?

A. Yes, sir.

Q. Weather-stress is ignored?

A. Yes, sir.

Q. By ignoring weather-stress as the necessity of any of these expenditures, a less sum is attributed to intrastate cost than otherwise would have been, if you had taken revenue as the basis of your weather-stress items division?

A. Yes, sir.

Q. 59, repairs of cribbing and bulk-heading,—all attributed to the interstate business, as I understand it, on the ground that it pertained to docks at Duluth?

A. Yes, sir.

Q. Did it not all pertain to some work in Trout Brook in this city?

A. I don't know, sir.

Q. Well, how did you attribute it to Duluth and charge it to the interstate business unless you knew something about it or had some information on the subject?

A. It is the Terminal division, and it is probably an error in thinking of the only docks they had being at Duluth and figuring that the necessity of cribbing and bulk-heading would be at that point.

Q. There is no dock at Trout Brook that I know of.

A. No, but I was thinking of the docks and thinking of cribbing and bulk-heading in connection with water it was probably there; I know that it is on the Terminal division, however.

Q. 66, maintenance of leased lines,—divided between state and interstate on the ton-mile basis not equated. Would the equated ton-mile basis produce a greater cost for the intrastate business, and would it be erroneous to use the equated ton-mileage basis?

A. I have stated in that regard—"The next item is maintenance of leased lines. It is a small item and is best divisible upon the ton-mile basis, which assigns 14.826 to intra and gives us the result shown. The reason for that was that I had at that time no basis to divide that expense between inter and intra upon and that I did not consider the possible variation which it might be from going in and equating tonnage, or whatever would be necessary on that, as sufficient to warrant the amount."

Q. You had the equated ton mileage percentage derived from your entitled-to table, did you not?

A. Yes, sir.

Q. And it did not require any computation at all to use it, did it?

A. No, sir, not if I had used the equated ton-mileage.

Q. And you also had the ton mileage, which was one of your key percentages, hadn't you, unequated?

A. Yes, sir.

Q. And it was just a question which one you should use, wasn't it?

A. Yes, sir.

Q. And if you had used the equated ton mileage, it would have attributed more to the intrastate business; and also I desire to ask you, in the same question, would that be an unfair and erroneous basis of division of that item?

A. No, sir; I would consider it about an even-up which of the two I would use.

Q. About an even thing?

A. About an even thing on that. I would not object to the use of the other mileage on that basis. I took this one because it happened to be right at hand and more convenient and to my mind slightly in favor of it instead of the other.

Q. Then you think your law of general averages would take

the place of the equating of ton-miles when you had both percentages at hand?

A. You must see that this is the maintenance of leased lines, Mr. Butler; and that I considered in that maintenance of a leased line that the ton-mile basis was a fairer basis than the equated ton or any other, and so took it.

Q. Define the difference between the maintenance of a leased line and the maintenance of an owned line, in so far as it concerns the division between intrastate and interstate freight costs. Why should not they both be divided the same no matter who owned the road?

A. The maintenance of a leased line could be very properly divided upon the basis of all the expenses going to make up that maintenance, whether they be in the nature of conducting transportation or in this removal of snow and ice and so on, which we have taken here, these maintenance of road and structure accounts. I judge they are all in the maintenance of road and structure accounts, and that could have been taken upon the average of all the other accounts in this item and so prorated.

Q. It would have been logical to have done so?

A. I think it would have been better than what I have used, yes, sir.

Q. Repairs of buildings,—you divided that item between freight and passenger on the basis of certain allocations, did you not?

A. Yes, sir.

Q. To-wit, the repair and maintenance of certain exclusively freight buildings and certain exclusively passenger buildings which were used as the basis for division of the maintenance of all of the common buildings?

A. Yes, sir.

Q. And then when you came to divide on this Table No. 7 between state and interstate, you regarded it as a general expense and attributed 20 per cent of it to state and 80 per

cent of it (disregarding small decimals) to interstate?

A. Yes, sir.

Q. Divided it the same as general expenses?

A. Yes, sir.

Q. And the general expenses you divided how?

A. On the basis of the prior accounts.

Q. In the whole statement, or in one of the grand accounts? It was on the preceding accounts, was it not?

A. Yes, sir, it was on the preceding accounts.

Q. So your division of 56, removal of snow and ice, became the standard for 57, 60, 61, 62, 63, 64, 65, 67 and 68, and they, being in the preceding accounts, became factors for division of the general expenses; and the repairs of buildings, being in the nature of a general expense, was divided as general expenses are; am I right?

A. The building, yes, sir.

Q. So that the division of 56, the removal of snow and ice, becomes a kind of a keystone to the whole arch of this division, does it not? because, in one way or other, either directly or indirectly, you make pretty nearly everything else depend upon that division?

A. No, sir, not necessarily on the removal of snow and ice, but on the factors which enter into the division of snow and ice are also factors in all the other division. It would make it seem rather invidious to state that I have divided everything on the basis of snow and ice, making snow and ice the criterion of the division; but it so happens that the same factors largely enter into the division of the other accounts, and while snow and ice is divided on the same basis as the other, there is no reason for saying that the snow and ice was the basis upon which I divided the other accounts.

Q. No, it merely became a coincidence?

A. It so happens that it is on the same basis.

Q. Mr. Hillman, I don't understand very well how to make

these figures. How did you get that percentage for the buildings before you divided the preceding items?

A. Because that was omitted from the total up to that date, and the total expenses taken, and that wasn't divided until after we had counted up what we had already divided. The same way with the general expenses.

Q. The repairs of buildings was laid aside then?

A. Yes, sir.

Q. Then when you came to your general expense account you averaged up all the rest of the divisions and divided that, and then when you had got that percentage you went to your buildings item and divided that?

A. No, sir, I used the same percentage that I applied to my general expenses to my buildings.

Q. Then you just added your buildings into your general expenses?

A. Practically, yes, sir; it happens to be in another general accounting division.

Q. I know, but you took it out of its place and added it to the general expenses; that was the practical effect of it, wasn't it?

A. Yes, sir; treated it as a general expense.

Q. A good many of these buildings are station buildings?

A. Yes, sir.

Q. But there are also some very important buildings that are shop buildings, and large expenditures to maintain them?

A. Yes, sir, and general office buildings, several.

Q. It is true, is it not, that the intrastate business uses the station buildings, ton per ton, a great deal more than the interstate business? The average haul would indicate that, among other things.

A. Yes, sir, they do use it more.

Q. Well, just tell me how you reach the arithmetical determination that the average of all of the other things would

fit a case of that kind,—because the buildings are general in their use between freight and passenger business and interstate and intrastate.

A. Between interstate and intrastate, and being general in their use, and those factors of the length of haul and handlings and all, (that have been taken into account in the prior divisions,) and being factors in this prior division between inter and intra, it has seemed to me that that is the factor and the nearest factor we can get to the use of the buildings in toto as between inter and intra.

Q. Largely a matter of conjecture, isn't it?

A. Yes, sir, I will admit that that is a matter of conjecture.

Q. The rankest kind?

A. Not the rankest kind. It is a matter of conjecture, and it enters into that; but it has a basis, as you understand, from the division of all the prior accounts, where all the factors which you have mentioned, as shops, stations, general office and other buildings, have been used, and all the factors have entered into these prior divisions, and I consider it as a fair factor; and yet I will admit, as you say, that there is a matter of conjecture in that.

Q. There is, in a good many of these, isn't there, an element of conjecture, divisors that you were using on Table No. 7?

A. There are some elements, yes, sir; not serious.

Q. 70, repairs to water supply, divided on the basis of the train-movement expenses, items 10 to 27,—an item that we had some trouble about?

A. Yes, sir.

Q. Now, if that division from 10 to 27 is wrong, this one is wrong, isn't it,—70?

A. Yes, sir, that would be wrong.

Q. Now, why should not the repairs of water supply be separated into two parts, some of it attributed to the switching distance and divided on the same basis that you divide the

switchmen's wages, and then take the road engines and divide that on the basis of the train-movement cost?

A. If I had excerpted the switching movement from the above accounts there, that would have been all right; but as they are in there, the account to which you refer, No. 70, has got to stand by the justness of the 10 to 27 items.

Q. 71, repairs to docks, wharves, landings and inclines,—

A. I have taken those—

Q. —carloads handled out of Duluth and docks, I think.

A. Yes, sir.

Q. In the months of April and October, 1907?

A. Yes, sir.

Q. But you did not ascertain, did you, what the true intrastate or the true interstate carloads were at that time? I so understood you to testify.

A. Yes, sir, there is an element in there, Mr. Butler,—

Q. Of conjecture?

A. —which we have spoken of right along, which would make a difference in this account of the 40 per cent which I have used.

Q. A difference of 40 per cent?

A. No, a difference in this 40 per cent which I have used. That error is still contained in this computation, sir, and inasmuch as that affects it the division is affected here, sir.

Q. In the division of account 59, which was repairs of cribbing and bulk-heading, you attributed that all to the interstate business, because, as you supposed, it was done at the docks of Duluth; now, why not treat 71, the repairs to docks and wharves and landings and inclines, which are at Duluth, on the same basis as you did the repairs to cribbing and bulk-heading, which were not, but which you thought were at Duluth?

A. It certainly should have been done that way, sir; account 59 should have been divided on the 40-per-cent basis.

Q. One or the other of them is wrong?

A. That was an oversight entirely, and it was also an oversight in assigning that as I did, for the reason that I see that cribbing and bulk-heading $35.61 was incurred upon the Terminal division, and I overlooked the fact in making this division.

Q. Item 72 depends on the correctness of your division from 10 to 27, which includes that half million dollars of switching expenses; isn't that true?

A. Yes, sir.

Q. And 73, the repairs of shop-tools and machinery, is based on the results of equipment repair accounts, 45, 46 and 47?

A. Yes, sir.

Q. And these three accounts, if divided wrongly, would produce a bad result here?

A. Yes, sir.

Q. And in making this division of repairs of shop-tools and machinery, both in your division between freight and passenger and your division between state and interstate, you assume, do you not, like use of tools for a dollar's worth of repair on box-cars as you do for a dollar's worth of repairs on locomotives?

A. Yes, sir, they are divided upon the basis of the expenses of the shop, sir.

Q. Your observation about railway shops has undoubtedly indicated, if you stop to reflect about it, that very cheap (comparatively) and inexpensive tools are used about the car repairs while very important and expensive tools are used to repair locomotives; isn't that true?

A. Yes, sir, but you must also recollect that these minor tools and the smaller machines are not calculated to withstand the strain which we have on the larger machines and that they would show their wear more rapidly than the others, and I

think that that would be fairly shown by the use of the utility there.

Q. But the cost of repairing cars is relatively very great, is it not,—freight cars?

A. Relative to what, sir?

Q. Repairing locomotives and other things and the repairs of equipment.

A. It shows an increase of about 75 per cent more than locomotives.

Q. Repairs of box-cars, alone, is about 10 per cent of all operating expenses, of every kind and description, is it not?

A. Repairs of freight cars is just about—

Q. Of all freight expenses.

A. No, not quite 10 per cent of all; about 9½ per cent of all expenses.

Q. And stationery and printing in this account you divide on the basis of the division of the other accounts under this head?

A. Yes, sir.

Q. 80, traffic department expenses, you divide on a straight ton-mileage basis, do you not?

A. Yes, sir.

Q. Why would not revenue be a good deal better than that? that is what they are after, these solicitors in the traffic department, isn't it?

A. Yes, sir, but—

Q. Why should you charge up to traffic expenses seven times as much for a carload of coal interstate as you do for a less-than-carload-lot of first-class merchandise moving in the state for a like distance? Well, we will pass that.

A. That is the same question that you have asked before concerning those things and I can only make the same answer.

Q. The law of general averages?

A. That, on the basis of the law of general averages, we are

entitled to make the division which we have, on the ton-mile basis, between the inter and the intra on the traffic-department expenses.

Q. Before it is justifiable to assume or apply a law of general averages in any of these matters, it is necessary to have some data with respect to the details entering into the average, to see whether or not the application of the law would be justified under the circumstances; is it not so?

A. Yes, sir, and in this case it would be necessary for us to go into the details of the expenses which were incurred, and the amount of freight which this traffic department obtained, and what the character of the freight was that it obtained, and how much time and expense (expense in this case) was put in on it; it would be a practical impossibility and therefore the net result of the entire activities in which this expense was incurred was the ton-miles which it produced, and therefore it is a proper factor for the division.

Q. And therefore the law of general averages applies; does that not follow from your statement?

A. Yes, sir, that is right.

Q. The heavy ton-miles are produced in the grain and coal business?

A. Yes, sir.

Q. Traffic department expenses and outside agencies are not very active in either, are they?

A. I should judge they were as active in that as in any other department of the business.

Q. 81, outside agencies,—here you say that 10 per cent is attributable to intrastate and 90 per cent to interstate,—why?

A. For the reason that, as a general thing, the outside agencies are not used for intrastate business.

Q. How do you get your 10 per cent?

A. As I stated, in order to avoid any injustice to the Rail-

road Company, we have allowed them an arbitrary of 10 per cent of the amount.

Q. Pure conjecture, isn't it?

A. It was an arbitrary amount.

Q. "Arbitrary" means without any reason; a thing arbitrarily done is done without any reason, is it not, as you understand the use of the term,—pure conjecture, in other words?

A. Yes, sir, it is an absolutely arbitrary division.

Q. This expense is incurred over the whole line as a unit, is it not?

A. Yes, sir.

Q. And divided as between states, which division was ratified by you on the basis of revenue-train mileage?

A. Yes, sir.

Q. 82, advertising,—you told us that that was assigned to the intrastate business, as I have it.

A. Yes, sir.

Q. Because the expense was principally in connection with advertising charges of unclaimed freight. Now, is there not unclaimed freight of both intrastate and interstate business, and is not this pure arbitrariness or conjecture?

A. Yes, sir; I did not stop to divide or to make any division of the $763 there, but in order to get it out of the way I assigned it absolutely to our side of the controversy or to the intra.

Q. I didn't know that you had a "side" to this controversy, Mr. Hillman. When you started this investigation I understood that you were after a scientific exposition of the truth, the fixing of a rule that would apply to this road and to all other roads. Now, is it true that you have had a side of this controversy which brought about the result of reducing the passenger cost in the division between freight and passenger and reducing the intrastate-freight cost in the division between state and interstate?

A. No, sir; that was an unfortunate use of the term. I have in this matter endeavored to be absolutely correct between the two sides, and where there was a doubt I will state that I have inclined towards the Railway Company from the fact of my being employed by the other side. I want to be exactly fair, and my use of the term "to my side of the controversy" was an unfortunate one. I meant that in that case we did—

The MASTER: That is, you had in mind the fact that you were called as a witness for the State?

WITNESS: Yes, sir, and I took the expense on the State's side of the account.

Q. The general office expenses you divided 20 and 80, practically?

A. Yes, sir.

Q. Depending upon all the other divisions?

A. Yes, sir.

Q. The passenger division is evidenced by your Table No. 11?

A. Yes, sir.

Q. In this division, generally speaking, you have followed the same principles that you have laid down and followed with respect to the division of the freight costs between state and interstate?

A. Yes, sir.

Q. That is, you divided the whole cost into haulage and non-haulage expense first,—

A. Yes, sir.

Q. —and then you dealt with them separately,—

A. Yes, sir.

Q. —without any analogy to your method of division of the freight costs between your train-movement costs and your other costs?

A. Yes, sir; those haulage items, however, I will say, while they are headed Haulage and Non-haulage, there is a little

different method of treatment in some of them, and while I have grouped them under that heading, they are not strictly the same in the maintenance of road and structures and the other, as you will see by reference to my straight testimony.

Q. In your division of item 2, station agents, clerks and laborers,—you divided that on the basis of the number of passengers carried?

A. Yes, sir.

Q. And I think you stated that the labor incident to the routing and ticketing and handling of interstate passengers is much greater than that of state passengers; I believe you used the words "through passenger and local".

A. Yes, sir, I used those terms.

Q. And that that was indicated by the Company's division of the extra baggage and storage earnings shown on Table No. 12?

A. That was a sidelight on the subject, yes, sir.

Q. Did you find out how the Company divided the earnings derived from excess baggage and storage?

A. No, sir; I supposed they divided it exactly upon the fact whether it was an inter or intra, as it was so stated upon their division.

Q. Was it stated on their division? What were the words used on their division? Oh, you mean in their report?

A. In their report.

Q. If you refer to the annual report we can look at it.

A. I refer to the annual report, yes, sir, page 35.

Q. If you had understood that that item was divided on the basis of passenger revenue for the entire line, you would not have considered it of any value as a "sidelight", would you?

A. No, sir.

Q. My information is it was so divided. In dividing these expenses on the number of passengers handled between state

and interstate, it necessarily assumes, does it not, equal terminal service for each?

A. Yes, sir.

Q. An interstate passenger, a passenger taking passage at St. Paul to go to Fargo, by way of illustration, only has one such service, but if it goes to Moorhead he has two such services?

A. Yes, sir.

Q. So then, in order to have any accuracy in this division, there ought to be an entitled-to handling of passengers, or some other term equivalent to your handling factor that you built up in the freight business?

A. Yes, sir; as I stated on that point, that there is a record of the company which I called a side record (because it happened to be kept on the side of one of their sheets) which showed that one-third of the through passengers are no tax upon the facilities furnished by the stations outside of the terminal, passing directly through, while, on the other hand, I considered that off-set by the extra labor of ticketing and routing passengers and therefore took it.

Q. That is another case for the application of the law of general averages—that the use of the depots and facilities in the state for the local passenger would probably be double that of the interstate passenger, but in the sale of tickets and the routing for the longer distance, interstate, you will offset that; so it is another case for the application of your rule of general averages, is it not?

A. It is a case of my assumption, I guess you would call it, Mr. Butler.

Q. Conjecture, I would call it.

A. Conjecture that the one offset the other and that it was applicable to the number of passengers handled.

Q. What are the percentages you divided this on,—67.57 for the state?

A. 67.52.

Q. For the state?

A. And 32.48 inter.

Q. You didn't make any investigation to justify that, did you, or the assumptions or conjectures underlying it?

A. No, sir.

Q. Would information that the use of the terminals for the months of July and November, 1908, indicate that 82.23 per cent chargeable to state and 17.77 chargeable to interstate, affect your conclusion as to the propriety of your percentages?

A. As I understand, those are for the terminals?

Q. Yes; I use terminals in the sense of stations determining the route of the passenger.

A. That would be covered by the statement I made that it would be claimed in controversion of this division that very many of the through passengers are no tax on the local facilities but pass through or over without their use but that I considered, that the extra labor of handling those inter passengers, (through passengers inter) was far in excess of those using the facilities and that therefore I could assume and did assume the percentage as shown by the number of passengers handled.

Q. Would information that the number of tickets destined to points in the state of Minnesota and to points outside of the state of Minnesota sold at St. Paul, Minneapolis and Duluth, in April and October, 1907, indicated 76.07 per cent to state and 23.93 per cent to interstate business affect the value of the application of your general-average rule here?

A. I think under the statement that the tickets sold at those terminal points show 24 per cent only inter and that another statement which you have quoted shows 82 per cent of the total business in the state was intra, it would necessitate an investigation on that point.

Q. You didn't look those matters up at all, did you?

A. No, sir.

Q. Just conjectured at it. Item 3, station supplies,—you estimated that one-fourth of the station supplies were used in connection with switching-signal and crossing lights?

A. Yes, sir.

Q. Was your estimate based on facts, if so, what facts?

A. I had occasion, when auditor of the elevated road, to look into that matter, and while I cannot claim that the percentages shown by that elevated road would be applicable here, I used that estimate of one-fourth which I obtained on that road.

Q. What road was that?

A. That is the Metropolitan Elevated, in Chicago. While I cannot claim that that would be accurate, it would be—

Q. It would be mere conjecture as far as this is concerned, wouldn't it?

A. It would be an indication, yes.

Q. Well, it would be a mere conjecture, wouldn't it, rather than an indication? That was purely a passenger road, wasn't it, an elevated road in a great city?

A. Yes. It has its switches, its terminals, and so on, just the same.

Q. You didn't use this same plan when you were dividing the station supplies applicable to the freight business, did you,—attribute one-fourth of the supplies to the switch-signal and crossing lights?

A. I ran it up on that basis after I had done it the other way, and found instead of a charge of $13,995.16, which we got on our division as chargeable to passenger business, that it made $14,105.46, (a difference of $110.30) and I allowed the first figure to remain.

Q. Notwithstanding the apparent inconsistency in method?

A. Yes, sir. It is only a difference of $110, and I did not think it necessary to go back for that.

Q. Now, the majority of these switch-lights, signal-lights

and crossing-lights are at terminals, are they not,—practically all of the 25 per cent—and should be divided as a terminal expense rather than a train-movement expense, should they not, as terminal expenses are?

A. No, sir, I think they are fairly divisible upon the train-movement basis.

Q. Now, take station furniture; you found that the interstate passenger traveled in Minnesota 3.8 times as much as the intrastate passenger?

A. The average haul was 3.8 times as great, yes, sir.

Q. 3.8 times as much in a single trip, so you equated by multiplying by 3.8 times, did you not?

A. I simply took 3.8 to 1 on that.

Q. That is equating, is it not, the passenger, state and interstate, on the relation of the average ride of each?

A. Equating would mean that I would take their average hauls and the number of passengers, and so on.

Q. I see the distinction; but you didn't do that?

A. No, sir.

Q. You assumed a like number of each class?

A. Using 3.8 times as much.

Q. Now, was there a like number of persons of each class, state and interstate, or anything like that? (I misunderstood the significance of that at first.)

A. No, sir, there was not.

Q. A good many more state passengers than interstate, is my recollection.

A. Yes, sir, about twice as many.

Q. And the interstate passengers rode a good deal farther —3.8 times as far—only used the furniture in the station once in the state, presumably; isn't that right?

A. Yes, sir.

Q. Now, in view of all that, don't you think you have charged too much to the interstate business and too little to

the state business on this item?

A. Yes, sir, on that basis I should have doubled that and made it 7.6.

Q. You should have equated? as I thought you did.

A. Yes, sir.

Q. Why didn't you divide the station supplies the same as you did station furniture, or at least 75 per cent of the station supplies outside of the switch-lights and signal-lights?

A. Well, I had that in view at one time, but I concluded that there was a better basis for that division, as far as the supplies in the station go and the use.

Q. But if you had corrected 4 so it would be as you say it ought to be, and divided 4 as it ought to be, and 3 at 75 per cent,(as you did 4) it would charge more to intrastate cost, wouldn't it?

A. Yes, sir.

Q. A great deal higher per cent?

A. Yes, sir,

Q. 5, switchmen and watchmen, you divided on the basis of passenger miles?

A. Yes, sir.

Q. For each class. This is a terminal expense, is it not, practically all; at least the switchmen are, and most of the watchmen; and should not that be divided as No. 2 is (station agents, clerks and laborers), on the basis of the number of passengers carried, and if you had so divided, would you not have that charged more to intrastate cost?

A. It would have charged more to intrastate cost, but I consider that the item of the switching in the passenger is justifiable to spread it out into the state and on to the length of his run per passenger mile.

Q. That is, you think it costs more per passenger to switch one for Crookston than it does for White Bear? or does the law of averages fix that?

A. Well, it don't cost any more to switch the passenger, but I thought the number of passenger miles which that passenger was going—it was justifiable to spread it over his—

Q. In dividing between state and interstate costs?

A. Yes, sir.

Q. But when you were dividing the freight cost under this item, you equated the tons moved, did you not?

A. Yes, sir.

Q. So as to overcome the inequality by reason of the average haul. Why would not the law of general averages pull you through there the same as it does with the passenger?

A. Because our passengers are not handled, as a general thing, in our "less than carload lots," and that equation of the tonnage was in order to bring our less than carload lots up even with our carload basis.

Q. But you equated your ton-miles, didn't you?

A. Yes, sir, I equated the ton-miles on the same basis, to bring the less than car load lots up to the other, while the passengers are not handled on that basis.

Q. And ton-miles always involves the length of the haul?

A. Yes, sir.

Q. 8, telegraph expenses. Of this total amount you assigned to haulage $35,811.86, and you divided the non-haulage item of $11,504.88 on the basis of the number of passengers carried, on the ground that the telegraphing outside of train movement varied according to the number of passengers carried and that most of such telegraphing would be concerning reservations of berths, etc. Is that a fair statement of your holding on that?

A. Yes, sir.

Q. Did you take into account the fact—as I am informed it is a fact—that the Western Union Telegraph Company occupying the lines along the road of this Company, handles the commercial telegraphing on the line of the Northern Pacific

Company and assumes a part of the expense and is paid by the Railway Company for sending telegrams of the class to which you referred, reservations of berths, etc?

A. Yes, sir, I took that into consideration. In referring to this commercial telegraphing I especially qualified it by the term "railroad train" commercial telegraphing, and this case does not refer to where a man is sending a paid telegram but to correspondence which is necessary between agents and officials, which is done principally without reference to the Western Union matters, with reference to their tickets and their berths.

Q. The only class of telegraphing you referred to was reservations of berths, and that, I am informed, is paid for by the Railway Company to the Western Union company.

A. My notes read,—that most of the telegraphing would be concerning the reservations of berths, information as to through tickets etc., the agent as a general thing being familiar with state business, and it is only when he gets off his line and into the connections East or West that it is necessary for him to communicate with headquarters.

Q. Yes, but all of that is paid for by the Railway Company to the Western Union, I am told.

A. No, sir.

Q. You say it is not, as a fact?

A. No, sir.

Q. Reservations of berths?

A. Reservations of berths and a large part of that did not go into the fact of what the Northern Pacific paid, but if you reserve a berth at Moorhead for any purpose, the agent would attend to all that telegraphing for you, and he would, as I should judge, not pay the Western Union anything for it, but transmit it over the railroad wire to the general agent at St. Paul.

Q. Mr. Hillman, my information is that the Railway Com-

pany pays the Western Union Telegraph Company for that business. Now, do you say that is not the fact or that you don't know?

A. I do not know.

Q. Would it make any difference?

A. Practically none, no, sir.

Q. So you would divide it the same anyway?

A. I would divide it the same anyway if that be the fact.

Q. 9, operating expenses at terminals,—you divided that on the basis of the passenger mile?

A. Yes, sir.

Q. Should that not be divided the same as account No. 2, station agents, clerks and laborers, $55,564.54?

A. No, sir, I think not, because there are a larger number of operating expenses not clerks and laborers in that. If you will recall, I said that this is not the correct factor but we have no other.

Q. And its correctness depends upon conjecture, does it not, largely, and not upon estimate?

A. The passenger-mile basis can hardly be considered as a conjecture, it is a fact. The application of it might be considered as a—

Q. As a guess?

A. —as a matter which was more or less unjustifiable.

Q. Operating leased lines.

A. I divided that on the passenger mileage.

Q. You classified that as a non-haulage item, did you not?

A. Yes, sir.

Q. It involves the movement of trains, does it not? They go over the leased lines, don't they?

A. Well, not strictly that, no, sir.

Q. In this non-haulage item occurs this same error (if it be an error) of including the passenger proportion, which I understood you to say was 5 per cent of the switch-engine-mile-

age cost and 95 per cent of which switch-engine-mileage cost is included in what you call the train-movement expenses in the freight department; there is 5 per cent of that in here, isn't there?

A. 5 per cent of the switch mileage?

Q. Yes.

A. Yes, sir.

Q. That is, the cost of 5 per cent of the switch-engine mileage?

A. Yes, sir,—which is a factor which I found was fully justified by the Northern Pacific uses of the assignment of the fuel account since our last hearing.

Q. You have justified that, have you?

A. Yes, sir.

Q. In the maintenance of road and structures account, take the various items of that, did you divide the items there on the same basis that you divided between freight and passenger under Table 4, haulage representing the wear and tear, and the non-haulage representing the weather-stress; isn't that the way you divided those items?

A. Yes, sir.

Q. Now, the relation of revenue to passenger per mile, state and interstate, is about a parity, is it not, according to the proof in this case—substantially so?

A. Yes, sir.

Q. The average revenue per passenger per mile is about the same in the state business as it is in the interstate business?

A. Yes, sir.

Q. So when you come to divide the maintenance account between state and interstate on the passenger, you follow your weather-stress divisions, explained in connection with Table 4, and divide on the basis of revenue, do you not?

A. Yes, sir.

Q. But when you divide the maintenance account, on Table

7, between state and interstate freight, the relation of revenue per ton per mile is as 144 is to 100 between the state and the interstate, and there you reject that and divide on the basis of use, do you not?

A. Yes, sir.

Q. And if you had followed in the freight business the same method of division as you have in the passenger business, on Table 11, and as you did between freight and passenger, on Table 4, you would have attributed much more, would you not, to the intrastate freight cost?

A. Yes, sir. You must remember in this case that the revenue, and, as you say, the use of these two being so closely allied, of so much per passenger per mile, that the difference between the use of the gross-earning and of the passenger-per-mile basis is practically nil and—

Q. But on the face of the thing it is inconsistent, is it not, when dividing between interstate and state, to use one method in these maintenance of way accounts for the freight and another method wholly dissimilar for the passenger?

A. Yes, sir.

Q. Using revenue in one case, and for the other—

A. In this passenger case I should have used the other basis, but, as I said, when I looked over this and found the matter as it stood, where the receipts for each one were practically the same, I didn't change.

Q. And do you not agree with me, Mr. Hillman, that the departure from your rule that weather-stress elements should be divided on the basis of revenue, when you enter the problem of intrastate-freight cost, which apparently reduces that cost very much, justly subjects these papers to the criticism of a purpose of the author to keep down the intrastate costs?

A. No, sir, I think not.

Q. You think there is a good reason for the difference—for the change?

A. There is a good reason.

Q. Table 16,—that, as I understand the item, attributes $94,435.67 of miscellaneous income to Minnesota intrastate business; am I right in my understanding of that item?

A. Of the miscellaneous income?

Q. Yes, you attribute $94,435.67 to intrastate business in Minnesota; am I right?

A. That is on Ex. 3-M?

Q. Ex. 3-M or Ex. 3-L.

A. Ex. 3-L,—I believe that is the amount.

Q. Now, if this income was derived from investments outside of the state or within the state, but which things were not used in the conduct of the business, or if derived from interest on cash deposited, or similar items, it ought not to be taken into account at all, had it?

A. Yes, sir.

Q. That is, if that were an income for lands leased to farmers in the state of Washington, it should be—

A. Yes, sir.

Q. —attributed to the intrastate business?

A. Yes, sir.

Q. If it were interest on bonds of the Union Pacific Company, for example, that it happened to hold in its treasury, it should be attributed to intrastate business?

A. A just proportion of it, yes, sir.

Q. Yes, I mean a ratable proportion.

A. Yes, sir.

Q. Divide the whole item on the basis of revenue, I suppose? Here you have a large lump sum—

A. Yes, sir.

Q. —derived from investments, in bonds and things wholly unconnected with the operations of the Company, mere investments, then that should be divided to the intrastate business in Minnesota on the basis of earnings intrastate in Minnesota

compared with all of the earnings of the line?

Witness examines memoranda.

Q. I am just looking for the general principle and not the figures. I will not take time about that.

A. Yes, sir.

Q. Then no matter where the money comes from, it should be attributed to the intrastate activities and added to the earnings in determining the reasonableness of the rates, as I understand you,—general rule?

A. Yes, sir.

Q. So that if we could conceive of a railroad company so opulent in outside investments (in farm lands, for example,) that the rentals from the farm lands would cover all of the operating expenses, then the application of your rule would justify free haulage of freight and passengers in the state of Minnesota?

A. If you will allow me to read from this statement, which answers the question, I say yes, sir. As we say here, "We have now the other miscellaneous receipts which is classed by the Railway Company as net income from investments. We take it that the sources from which these investments were rendered possible, were two: first, from the net earnings, and, second, from the use of securities. In the one case it is evident that the division between inter and intra should therefore be on the net-earning basis; in the second case, as the cost of carrying the securities issued by which these investments were obtained depends also upon the net earnings and the net earnings being dependent upon the gross earnings, it is therefore evident that the income from these investments should be divided between inter and intrastate on the gross-earning basis."

Q. Well, I just wanted to be sure I understood your rule as to the application of the principle,—and it is this: that, from any fortunate investments or speculations, if it makes a profit, without regard to the use of the money in the operation

of the business, that is to be added to the revenue or subtracted from operating expenses in getting up an income account to test the reasonableness of the rates.

A. I prefer to put it that it is a net income which should be added after the deduction of the operating expenses. I do not believe in the application of an income of that character to the reduction of an operating expense.

Q. This may be outside of your employment altogether, because you didn't have anything to do with the valuation of the property, but if you do that, shouldn't you add to the valuation of the property, the value of the farms or bonds or what—not from which you derive this miscellaneous income?

Mr. O'BRIEN: Well, we will be very glad to do that, for instance, in the case of the Northwestern Improvement Company, if you will add to the earnings the $17,000,000.

Mr. BUTLER: Let us have Mr. Hillman's views about that and you and I will exchange ours later on. I don't care for yours now, I am just asking for Mr. Hillman's.

A. Well, I would say no, and I will give you the reasons for that, but it will take considerable length. In answer I will say no and then you may come back at me for the reasons.

Q. I will assume they are the same as you have given for the other.

The MASTER: Don't be placed in a false position on my account, I am in no particular hurry.

Q. Of course, the allocations in your exhibit L depend upon the soundness and verity of all that has gone before?

A. Yes, sir.

Q. Including this last statement—that outside income should be included but the value of outside investments should be excluded?

A. Yes, sir. As I stated, these tables being made continuous and consecutive and interdependent, a change in one necessarily follows to the total conclusion.

Q. In selecting the year's operating expenses you took June 30, 1907?

A. Yes, sir.

Q. Your October was in the next fiscal year ending June 30, 1908?

A. Yes, sir.

Q. October business is usually or always in excess of April business, is it not?

A. Yes, sir.

Q. On account of the grain and coal movement?

A. Yes, sir.

Q. Why didn't you select the operating expenses, then, which would be more nearly in size, at any rate, to the year in which October is found instead of the other year?

A. As I stated at the commencement of this testimony, the months of April and October were, to my understanding, agreed upon as being months which were typical of the traffic of the road and—

Q. I was speaking of the operating expenses.

A. —and that one month of October being in another year did not differ materially from the prior year of October, and the reason for taking October, 1907, was at the time the rates were in effect, while they would not have been in effect at the prior October, and having used that data we set up the losses which we finally checked up with Mr. Johnson's figures, we assumed that month and took it as being more convenient; while not taking the operating expenses for those two months I took the operating expenses for the entire year and retained those two months as typical of the business and the distribution of the business of the year.

Q. But why didn't you take the later year?

A. 1908?

Q. Yes.

A. For the reason that at the time I started this investi-

gation the figures for the year ending June 30, 1908, were not available, they had not been made up by the Railway Company.

Q. Then why didn't you take the same October that Mr. Johnson took for the revenue?

A. Because, as I stated before, I wanted the months of April and of October, and in setting up those months I chose the month of April, 1907, as the rates were in full effect at that time.

Q. The passenger rates were not.

A. The freight rates were, sir, and in October, 1907, the rates were also in effect. If I had gone back and taken October 1906, I would have had to compel my men to treat, you might say, the revision upwards in one case and downwards in the other, and in order to avoid confusion in the clerical force, I took the month of October, 1907.

Q. The Interstate Commerce Commission for the year immediately following the year that you took, required the railroad companies to add to their operating expenses certain sums on account of depreciation of equipment and structures?

A. Yes, sir.

Q. Did it include the structures or just the equipment?

A. It included, I believe, only the equipment. That is my recollection.

Q. I think that is right. Do you think that a just thing to do, Mr. Hillman, and that depreciation is a legitimate part of operating expenses?

A. I do, yes, sir.

Q. Did you include any of it in making this income account to see how that came out here—to show the profit on this business?

A. No, sir.

Q. Why?

A. Because it was not included in their expenses at the time,

and as I understood, their operating expenses which they had of the entire repairs and renewals of equipment—which they stated they had made (the repairs) liberal in order to cover that amount which afterwards they were compelled to cover by a separate statement from the Interstate Commerce Commission—for that reason I didn't take it into account.

Q. In so far as this mass of operating expenses fails to include proper sums to cover depreciation of equipment, just that far the net result of all your computations is affected, is it not?

A. Yes, sir, it would add a percentage of 2 or 3 or 4 per cent to the averages which I have stated here, as the case might be.

Q. It would add the proper per cent on the value of the equipment whatever that proper per cent may be?

A. Yes, sir.

Q. Would that not also apply to buildings and structures,—not the same per cent, but that there is some depreciation each year which ought to be added to the operating expenses?

A. As the buildings are renewed from time to time, that appreciation is taken into account and taken up and a renewal of a building would practically absorb that depreciation. If your road were absolutely new and your buildings all new, you then should have a charge in for that; but as you go on to the age of the N. P. and you commence your renewals of the way, it would gradually absorb that and would not need to be taken into account.

Q. That is directly opposite to the views expressed by Mr. Morgan, the engineer for the state in this case, is it not?

A. I don't know, sir.

Q. On that same point?

A. I do not know, sir.

Q. But, without regard to how it is taken care of, fair railroad accounting requires an addition to operating expenses

to take care of depreciation of buildings? The forms of getting it into the account may vary—

A. Yes, sir.

Q. —but that fact must be understood?

A. It must be noted that depreciation is a broad charge to operating expenses or to income if not to operation.

Q. And in so far as your figures building up the operating expenses here as one side from which is derived your so-called net-income showing, omit to take depreciation of buildings as well as of equipment into account, just that far is the net income in excess of what it should properly be?

A. Yes, sir, in so far as that compensation was omitted in computing up the N. P. operating expenses there is a discrepancy.

Q. In the operating expenses which you took from the books of the Northern Pacific Company is there, directly or indirectly, one solitary cent included to cover depreciation of equipment or depreciation of any other item or element of its property?

A. Yes, sir, in so far as the element of repairs and renewals goes, it is—as far as the renewals of equipment goes. The repairs of freight cars would necessarily include the substitution of a new car for an old one. On the same basis would be increase of capacity, and, as far as that took the place of the old one, the matter of depreciation would be covered.

Q. Wasn't that all taken care of in another account, called profit and loss account, where the depreciation for all prior time was estimated and taken care of by appropriate entries, which did not in any manner affect the operating expenses with which you had to deal?

A. Not according to my understanding of it. At the time I took this off I understood that that account, which was noted on the income account in the annual report, was taken into account in order to prepare for the orders of the Interstate Commerce Commission in fixing up their depreciation account

and getting a fair basis. If I am wrong in that—and if Mr. Johnson states that they had no depreciation and none of the renewals in their repairs of cars account, then by the amount of the proper amount of depreciation are the statements of the operating expenses—

Q. Too small?

A. —I was going to say "in error," but I will finish my sentence and say that there should be an amount added to the operating percentage to equal the depreciation.

Q. Did it not so indicate in their report—that they had in their profit and loss account taken care of the depreciation occuring prior to June 30, 1907?

A. Yes, sir, it was in a very large lump sum where they had made that adjustment, and had made the adjustment for the back years, and in order to get into line for the new order of the Interstate Commerce Commission.

Q. And they took care of about $6,000,000 in the profit and loss account, did they not, and not one cent of depreciation was added to the operating expenses, and that is disclosed, is it not, by their report?

A. That is the fact—which you state—that the reduction of the income is shown upon their income account, which I think is page 35 or somewhere along there, and in that whether or not they had taken all their depreciation into that account or whether they had included it in what you might call renewals (which are repairs and renewals of freight cars, locomotives, and so on,) I did not investigate.

Q. You have no reason to doubt, have you, the perfect candor and sincerity of the accountants of that office when they undertook to take care of their depreciation in an account outside of operating expenses for the year 1907?

A. No, sir, I am not questioning that at all, sir.

Q. And you have no reason whatever to say, have you, that there is a solitary cent included in the expenses of that year

which you took and assumed to be right to cover depreciation of any of their equipment or property?

A. No, sir.

Q. Then if these expenses be as they purport to be, to-wit, not including anything for depreciation, your net-income statement is too high just to the amount of the depreciation that is properly chargeable to the business under consideration here intrastate in Minnesota?

A. Yes, sir. If there is no allowance made for that renewal in their repair account, yes, sir.

Q. How much that would be you have not estimated and cannot express an opinion upon? I have not made any estimate of it, sir.

Mr. BUTLER: I intended to offer, and do hereby offer, as a part of Mr. Hillman's cross-examination, the testimony of Mr. H. A. Gray, the Comptroller of the Northern Pacific Company, which is on file in the case, attached to an affidavit used in support of the application of the Complainants for a temporary injunction.

Adjourned until Tuesday morning, July 20th.

FEDERAL BUILDING, St. Paul, Minn., Tuesday, July 27, 1909, the hearing was resumed at 10 o'clock A. M., having been continued by mutual consent until this date.

WILLIAM G. JOHNSON,
recalled for further cross-examination, testified:

By Mr. O'BRIEN:

Q. Mr. Johnson, Exhibit 79—Elliott was prepared by you?

A. I believe so.

Q. That was the Northern Pacific division, I believe, between freight and passenger, for the year ending June 30, 1908.

A. Yes, sir.

Q. The division between freight and passenger expenses was made by divisions in that statement, was it not?

A. Yes, sir; it was the sum of the various operating divisions, and not taking the state as a unit.

Q. Have you made a computation to ascertain whether or not it would make any difference if the state was taken as a unit?

A. I have not, no, sir.

Q. All of the common or overhead expenses were divided between freight and passenger upon straight revenue-train mileage?

A. Not all of them, no, sir; they were divided in accordance with the methods covered by an exhibit which was read into the record showing the Northern Pacific method for dividing common operating expenses between passenger and freight.

Q. Well, in the great majority of the cases the division was upon the revenue-train mileage?

A. In a great many cases, yes, sir.

Q. In a great majority of the cases, was it not?

A. No, I can't say that it was in the majority of cases.

Q. But wherever that method was used, switching mileage was not included in either freight or passenger?

A. No, sir.

Q. Either on any of the divisions or in any of the computations?

A. Yes, sir, in some of the computations.

Q. But wherever train-revenue mileage was used switching was not included?

A. No, sir.

Q. Have you ever made a computation to ascertain the number of tons of freight on the Northern Pacific road which would come under the classification of through freight as

given by Mr. Hillman; that is, freight which passed entirely over one division?

A. No, sir, not in this case; I have not.

Q. Not for this case?

A. No, sir.

Q. Or have you ever made a computation as to the number of tons of local freight according to the classification as given by Mr. Hillman?

A. No, sir.

Q. Have you ever made any computation as to the number of local and through tons of freight transported in the state of Minnesota by the Northern Pacific under any classification of through and local freight except interstate and intrastate?

A. Yes; I have made such a calculation.

Q. Are you able to state, from your experience as assistant comptroller of the Northern Pacific road and from any computations which you have made, whether Mr. Hillman's Table 5 correctly states the through and local tonnage, classified as he has given it upon the Northern Pacific, for the year for which that computation is made?

A. No, sir, I cannot say that I am in possession of information from which I could criticise Mr. Hillman's Table 5, which, as I understand it, was built on an "entitled-to" movement, not an actual movement of freight.

Q. Are you able to say how much the actual movements of freight would vary from what you consider an "entitled-to" movement?

A. No, sir, I never have investigated that.

Q. So far as actual movements are concerned, as determined from conductors' train-sheets, are you able to say whether or not Mr. Hillman's Division A of Table 6 correctly represents the actual movements of through and local freight, classified as he has classified them?

A. I have made some investigations along those lines,

and my results do not quite compare with Mr. Hillman's.

Q. Do you find a larger or less amount of freight carried on local trains?

A. I don't remember the figures now, Mr. O'Brien; I haven't them with me.

Q. Is the divergence between you very great?

A. No, I wouldn't say that it was very great.

Q. In Division A of Table 6, all Company freight is included?

A. Yes, sir.

Q. In Hillman's Table 5, Company freight is not included?

A. As I understand Mr. Hillman's Table 5, it is not included, but, of course, as to that I have not the facts as I didn't make the table.

Q. And Table 5, as you understand it, also refers exclusively to the main line?

A. I don't so understand it, no, sir; in fact, I do not see how it could well be confined to the main line.

Q. Then, Mr. Johnson, it is proper, if I understand you rightly, to say that, so far as you know, the tonnages, through and local, as classified by Mr. Hillman, if his classification of through freight as freight that goes over one entire division, and of local freight as freight which goes over less than an entire division, .. assumed to be correct, then the tonnages shown upon Table 5 are correct, so far as you know?

A. I cannot vouch for Mr. Hillman's work on Table 5, because I didn't make it up and I am not in position to say whether it is correct or incorrect.

Q. Have you not made a check on it sufficient to render it unnecessary upon your part to examine into that matter any further as an "entitled-to" table?

A. No, sir, I haven't; I am not in position to check it. I haven't the data to check it. When I say I haven't the data. I mean to say that in order to check that intelligently I would

have to examine every document that was used in connection with that table, and that would take an endless amount of time.

Q. And you have never made a similar computation for that year, yourself?

A. No, sir.

Q. Or for any other year?

A. No, sir.

Q. In the affidavit which you presented upon the application for a temporary injunction, you stated that, in your opinion, if I recollect rightly, the cost of transacting all freight business in the state was two and one-half times the cost of transacting the long-haul through business; I don't know whether you used the term "long-haul" or not, but the through business.

A. I believe I made such a statement in the affidavit,—

Attorney General YOUNG: That was the through interstate business.

WITNESS:—but I think the affidavit, itself, ought to stand for that.

Q. Well, is that still your opinion?

A. Yes, sir.

Q. Now, will you explain what you mean by that?

A. The statement that I made in that affidavit was based upon the investigation made at the time of the hearing before the Commission as to the merchandise rates, as testified to by Mr. Gray.

Q. Well, I know, but I just wanted you to explain exactly what you meant by that language.

A. It was intended to convey the idea that the cost of what we call our through business was, as compared with the short-haul business, in the relation of 2½ for the short-haul business against 1 for the long-haul business.

The MASTER: I would ask, right here, whether in the use of

the words "through business" you used it in the same sense that Mr. Hillman uses it?

WITNESS: No, sir; by through business there we meant the long-haul business of the Company.

The MASTER: Well, what is the long-haul business of the Company, according to your definition?

WITNESS: Well, I would class in the long-haul business such business as the lumber traffic from the Pacific Coast, business moving in large volume and for long distances.

Q. Now, Mr. Johnson, I suppose it is only fair to say that you constantly have the entire System in mind when you speak of the traffic of the road?

A. Yes, sir.

Q. That System extends from Lake Superior to the Pacific coast?

A. Yes, sir.

Q. So that when you speak of the through tonnage of the Northern Pacific road, you mean business which extends for a considerable portion of the entire system?

A. Yes, sir.

Q. And in that sense, all the business transacted in Minnesota is local business and short-haul business?

A. No, sir.

Q. That is, I mean all of the intrastate business.

A. Practically all of it, yes, sir.

Q. But when one comes to consider the business in Minnesota only, stopping at the boundary of Minnesota, we have to have another definition of through and local freight?

A. The definition, as used by Mr. Hillman, applies, as far as I can see, to the train service rather than the business carried.

Q. So that, when you made the statement which you did, as you say, in the affidavit, that the Minnesota intrastate business cost per ton mile two and one-half times the through busi-

ness upon the Northern Pacific road—

A. Yes, at least two and one-half.

Q. —at least two and one-half times—

A. Yes; that was my opinion at the time I made the affidavit.

Q. —you had in mind this: Minnesota business as a whole as one class; that is, Minnesota intrastate business as a whole, as one class—?

A. Yes, sir.

Q. —and the through business as to the System, such as the lumber freight from the Coast to the Twin Cities, as the other class?

A. Yes, sir; the long-haul business, as we term it.

Q. The long-haul interstate business; and your judgment was, that that Minnesota business cost not to exceed two and one-half times?

Mr. BUTLER: "At least," he said, Mr. O'Brien.

Q. At least two and one-half times the through business?

A. Yes, sir, at least two and one-half times.

Q. Now, all over the Northern Pacific System in Minnesota, and outside as well, there is a considerable amount of interstate freight which is hauled under the same conditions as the intrastate freight at the particular point under consideration?

A. If you mean by "conditions" the conditions of train-service, etc., I should say yes, there is some.

Q. Well, now, let us illustrate by this: there is a considerable quantity of interstate freight destined to points in Minnesota coming from eastern points which the Northern Pacific road receives at the Minnesota Transfer and delivers to its destination in Minnesota?

A. Yes, sir, there is.

Q. And that freight is all carried at the same rate as the Minnesota freight?

A. Not all of it, no, sir.

Q. And the only difference in the handling of that freight is that the interstate freight is received at the Minnesota Transfer under the conditions for transferring freight there, and the Minnesota freight may be received in the yards at St. Paul or at Minneapolis, and a great portion of it may be received at the Minnesota Transfer?

A. There is, of course, interstate business in Minnesota that is hauled under the same conditions as the state business.

Q. Now, there is also a large amount of business in Minnesota which is hauled over an entire division which is intrastate business?

A. Yes, sir, there is.

Q. There is wheat, oats, corn, flax, cattle, lumber, coal, logs, hogs and sheep?

A. Yes, I guess some of those commodities are hauled over an entire operating division.

Q. And it is true that there is a primary market in Minnesota for every product of Minnesota, with the exception of iron ore, is there not?

A. I assume that is true, yes, sir.

Q. Were you present when Mr. Elliott testified with regard to the economy of hauling freight over one entire division and over less than a division?

A. No, sir, I didn't hear Mr. Elliott testify, nor have I read his testimony.

Q. Or Mr. Hill's testimony so far as the state of Minnesota should be considered as through and local tonnage?

A. No, sir, I didn't.

Q. And you never have, yourself, come to a conclusion upon that point, as to what, in reference to the state of Minnesota, should be considered through and local tonnage?

A. No, sir, except that when I made the affidavit that you refer to I had in mind the long-haul through business.

Q. Well, from the best examination that I can make, Mr. Johnson, I think your affidavit is absolutely true, and that is what I am trying to prove.

Mr. BUTLER: We will admit it.

Q. And if you like, I will give you a computation on it now.

A. I don't understand what you mean by "giving me a computation on it."

Q. In that affidavit, in that statement, you were not comparing the intrastate business with interstate business entirely, but you were comparing intrastate business with one class of interstate business?

A. No, sir, I was comparing the through business, as I understand the word "through," with local business or short-haul business.

Q. Well, you considered the local business all of the intrastate business in Minnesota?

A. I considered that the bulk of the business was the short-haul business; that is, the bulk of the Minnesota intrastate business.

Q. And the bulk of the interstate business was the long-haul through business?

A. Yes, sir, the biggest part of it.

By Attorney General YOUNG:

Q. Mr. Johnson, I don't understand your answer clearly. May I ask a question?

A. Yes, sir.

Q. I want to know whether you mean that you compared the intrastate business of Minnesota, that is, that you compared the expense of doing the intrastate business in Minnesota, with the expense of doing all of the interstate business, or whether you compared it with the expense of doing what you call the long-haul interstate business.

A. I compared the Minnesota business as on the basis of

its being short-haul business principally, with what we call the through business or long-haul business.

Q. I know, but there is a very large part of your interstate business which is not long-haul, and in making the comparison, you did not include that class of interstate business as a part of the basis of the comparison?

A. When I made that affidavit, it was made on short notice and based on a general opinion of mine which was a deduction from previous investigations along that line.

Q. I don't care what it was based on so much as to what it meant. Whether or not, when you used the term "through business," "through long-haul business," you included in that the portion of the interstate business of your road which is local in its character.

A. If you refer to the business that is included in the so-called error, that is, business that comes to us at Minnesota Transfer and is hauled perhaps the same average distance as the intrastate business which comes to us at Minnesota Transfer, I considered that as being intrastate business.

Q. Intrastate business?

A. Yes, sir.

Q. Well, now then, let us have the matter in definite shape so that there can't be any misunderstanding. Did you, or did you not, in using the term "through business" intend to include in that term the portion of the interstate business which is short-haul and not through?

A. When I made the statement that, in my opinion, it cost two and one-half times as much for the Minnesota business, I took the average haul of the business as shown by our records, state and interstate, and my opinion was based entirely upon the figures as they stood at that time. We had not at that time run across the fact that a lot of interstate business had been erroneously included as state business.

Q. I don't care anything about that.

Mr. O'BRIEN: I think that is very important.

Attorney General YOUNG: I know it is important, but not on this question I am now asking.

Mr. O'BRIEN: He says that was included in the state business.

Q. Yes, you had included the state business in your mind at that time, and had in mind the inclusion in the state business of a considerable portion of the interstate business that was of the short-haul character?

A. Yes, sir, there was some of the short-haul character.

Q. But now, then, there is short-haul business in the interstate traffic?

A. There is some, yes, sir.

Q. A very considerable amount, isn't there?

A. There is, as the figures have been modified, yes.

Q. Well, now, what I want to know is,—why don't you answer the question, Mr. Johnson, what did you have in mind? Did you mean to say to the Court in that affidavit that you were comparing the cost of doing intrastate business in Minnesota with all of the interstate business of the Company?

A. Yes, sir.

Q. When you made the basis of two and one-half?

A. Yes, sir.

Q. With all the interstate business of the Company?

A. With all of the interstate business of the Company.

Q. Including the short-haul?

A. As set up in our statistics at that time, and which included the so-called error that has been referred to in this case so often.

Q. And when the error was discovered and the basis changed, your affidavit, of course, became incorrect?

A. Why, it wouldn't be absolutely incorrect but it might have to be modified slightly.

Q. But for the purposes of your calculation, you in your

own mind and in the language you used called all interstate business through business?

A. Yes, sir.

Q. Whether it was in fact through or not?

A. Yes, sir; the opinion was based on the average length of haul.

By Mr. O'BRIEN:

Q. And what was the average length of haul at that time, at the time you made that calculation?

A. I cannot remember the average haul now.

Q. It was much greater, however, than appears in Exhibit 80 presented by Mr. Elliott and also prepared by you?

A. Not very much greater, I don't believe. I haven't made calculations since, and I don't recall the average haul that we had on our records at the time I made that affidavit; but it would take a large volume of interstate business that was erroneously included as state business to change the average haul very materially of our interstate business.

By Attorney General YOUNG:

Q. Let me ask you another question: When you made the comparison between the intrastate business, as such, as you had it then in mind, and the interstate business, there was eliminated from the interstate business which you used as a basis the part of it which is most expensive to carry on, that is, the short-haul business?

A. The short-haul business that I have referred to as coming to us at Minnesota Transfer was treated as state business.

Q. Yes, and that is the business naturally that was more expensive to carry on than the long-haul interstate business?

A. Yes, sir, naturally it would cost more to handle that business.

Q. So that, if that had been included in your basis of comparison at that time, it would necessarily have reduced some-

what the multiple of 2½?

A. To a small extent, probably.

Q. To whatever extent the correcting of the facts would affect the result?

A. Yes, sir; it would have increased the cost of the long-haul business.

The MASTER: And decrease the cost of the state business?

WITNESS: Yes, sir, slightly.

The MASTER: And do I understand you to mean now that you include in that statement all interstate business as through business?

WITNESS: Yes, sir.

The MASTER: And all interstate business as local business?

WITNESS: Yes, sir.

By Mr. O'BRIEN:

Q. And that assumption upon your part was incorrect because you failed to take into consideration the interstate business which was hauled upon local trains and upon local conditions?

A. My assumption would be slightly in error, yes, sir; depending, of course, upon the volume of the business that was erroneously included.

Q. And should be, in your opinion, corrected by comparing all of the intrastate business and that portion of the interstate business which is hauled under conditions pertaining to local freight with the through interstate business?

A. That comparison might be made.

Q. In other words, Mr. Johnson, so that we will understand each other, I have here what I believe is a copy of your affidavit, and I will read that portion. (It occurs on page 6, Mr. Butler, of one of the affidavits given by Mr. Johnson. My copy is not dated.) "That in the opinion of this affiant, the cost of hauling freight included in the classes of business lo-

cal to the state, exclusive of all other service, is about two and one-half times as much as the cost of hauling through freight in through trains."

A. Yes, sir; *"hauling,"*—I want to emphasize the word hauling; it does not speak of all operating expenses.

Q. No, it speaks of hauling.

A. Yes, sir.

Q. In arriving at that conclusion, you had included in your state business a large quantity of freight which was really interstate freight, but was hauled under the same conditions as intrastate freight?

A. I wouldn't say it was a large quantity as compared with the total volume of business, but there was some in there, and the amount has been demonstrated, I believe, by an exhibit that I have made in this case.

Q. So that now, to make this comparison, your method should be corrected to the same extent as you have corrected the respective inter and intrastate freight?

A. Yes, sir, naturally that ought to be done.

Q. With that exception, the statement contained in your affidavit, in your opinion, is true?

A. Yes, sir, that it cost *at least* two and one-half times, for the haul.

Q. For the haul. Now, is it your opinion that the other operating expenses are incurred by through and local business in the same proportion?

A. In making the investigation we never went beyond the cost of the haul. We had never made any attempt to divide all operating expenses as between the two classes of business.

Q. There is no reason that you know of why a ton of interstate freight from here to the Coast should be credited per mile with a greater or less proportion of the President's sal-

ary than a ton of intrastate freight between here and Anoka, is there?

A. I doubt whether you have advisedly used the word "credited," because it is a payment and naturally would be a charge against the traffic.

Q. I think you are right, Mr. Johnson.

A. Excuse me for adverting to it.

Q. I am very much obliged to you. I will change the word "credited" to "charged."

A. That is a very deep question, Mr. O'Brien, and one that I would not care to answer off-hand without proper reflection. As I have previously stated, we never have gone beyond the cost of physically handling and hauling the freight; and I think that in the merchandise hearing before the Commission, Mr. Gray, the Comptroller of the Northern Pacific, stated clearly that he didn't make any attempt to go beyond that point; that the other factors were such as to leave the question a very open one as to what should be charged or should not be charged and what the proper basis should be.

Mr. BUTLER: I haven't read Mr. Johnson's affidavit since I read it to the Court, so far as I now remember, and it may be that upon reading it again we may want to offer it or some part of it in evidence in connection with his present cross-examination, and if we do, I suppose it may go in the record in connection with his present testimony.

Mr. O'BRIEN: Why, certainly.

CONWAY W. HILLMAN,
recalled on behalf of Defendants, testified:

RE-DIRECT EXAMINATION

By Mr. O'BRIEN:

Q. Mr. Hillman, in your cross-examination, in answer to questions propounded to you with reference to Table 5, you stated that Table 5 of Exhibit 3-M showed the service which the freight was entitled to as shown by the station agents' abstracts?

A. Yes, sir.

Q. You stated, further, if I remember rightly, that the freight did not receive that service?

A. Yes, sir.

Q. Will you explain what you mean by that?

A. I mean by that that the operations of the road, as far as the placing of through or local freight upon a through or local train, do not always follow the divisional basis; that is, a carload of freight moving entirely over the division from St. Paul to Staples would be entitled to a through movement; it might be that the local train, not having its full complement of freight, and the through train being well loaded, that car would be placed upon a local train and hauled from St. Paul to Staples. It might, on the other hand, come to where at some junction point midway between the terminals on a division there would be considerable freight which the through train might stop and pick up and bring on into St. Paul or the reverse direction. That illustrates the meaning of the words "entitled to" and "actual."

Q. The division between through and local, found in Table A, is based upon the assumption which you mention that the initial loading of the train continued during its entire trip?

A. Yes, sir.

Q. Is there any assumption included in the statements

shown upon Table 5, or is that a statement of fact, pure and simple, as to what the freight is entitled to?

A. That is a statement of fact.

Q. In the practical operation of roads, is it true that local freight is sometimes carried upon through trains and through freight upon local trains?

A. Yes, sir, it is. There would be very little of what they call the "peddling" car given to a through train.

Q. Well, now then, state what you meant when you said in reply to Mr. Butler that no freight ever did receive the service described in Table 5, no freight ever could receive any such service, and no railroad, as a practical matter, ever could be operated so as to render exactly that service to the freight.

A. It is necessary for the road to run both through and local trains over the main line, and those trains move according to their schedule daily. That is demanded by the business. There may be one or more through trains, and, as a general thing, there is but one local train moving over the division; should it so happen that these through trains should be loaded to their capacity and there should be a number of cars of through freight on the St. Paul division going from St. Paul to Staples, these cars which were left over would be put on the local freight, so as to give the engine its capacity for haul. On the other hand, the through trains might pick up a bunch of cars from St. Paul and carry them as far only as this junction point, only as far as Little Falls, and there back them off, which would be done in case the local train had its full complement and the through train was not loaded to its capacity. Those are the points which I meant when I stated that no road was operated on the "entitled to" condition, and it is, as I stated there, within the bounds of conception that those conditions mentioned in Table 5 might not be the true economic conditions.

Q. State whether or not, in your opinion, the variations

from the "entitled-to" movement which you have described would have such a material effect upon the cost as to render the use of Table 5, for the purpose of making estimates of cost improper.

A. Yes, sir; as I stated in my cross-examination, I would not like to use Table 5 as the operating table.

Q. And in the computations appearing upon Exhibit 3-M, you have, for the purpose of ascertaining the cost of moving the freight or the cost of train movement, used Division A of Table 6?

A. Yes, sir.

Q. But when you had ascertained the cost of train movement from Table 6, you then, for the purpose of ascertaining the cost of moving the total tonnage, took the relative amounts of through and local freight as shown upon Table 5?

A. Yes, sir.

Q. Now, why isn't that in effect the same thing as using Table 5 as an operating table?

A. Well, it might be considered its application to the operations of the road. The point for which Table 6 was used was the establishment of the cost of through and local trains. Having established that cost of through and local trains (I mean of freight moving on through and local trains) per ton mile, it then becomes a question as to how much of the through and local business was inter and intra. Therefore, when we come to the computation of the cost of inter and intra, it is but just that we should apply the cost which we have found of a local train to the amount of inter and intra which were entitled to that movement. If the ratio or the relation between these two classes of freight had been followed in whatever assignment was made to the actual operations, it should be made prorata, taking out or adding to on either through or local trains the same percentage that the entitled-to movement bears, and therefore that is the justification of

the use of Table 5 in that regard. I would say here that you must recollect that in that Table No. 5 is included all the movement on the branches—which are local movements. On our other table we are dealing with the main-line movements alone. If we deduct from Table No. 5 our branch-line movements of freight, which amount to 7.74 per cent of the total freight, we would then show the relation on the main line between through and local of 19.77 per cent as against 14.83 per cent shown by Table 5.

Q. What justification is there for the assumption that the cost of moving freight per ton mile upon the branches is at least equal to the cost per ton mile of moving local freight upon the main line?

A. An examination of the October "A. S. & M. A" statement shows on the branch lines in Minnesota 62,557 train miles, (I mean the branch lines in Minnesota and touching Minnesota,) while the freight movement on those branch lines, taken from the same statement, shows 19,331,515 ton miles; which gives us a net result per train mile of 309 net tons average on the branch. Taking the train sheets from which our statement was made up, which correspond to this A. S. & M. A. statement—that is, the basic sheets for Table 6-A—and making the computations from them as regards the number of trains and the tons, both through and local, shows that the average on the local train on the St. Paul division was 341 tons per train; on the third division, the Lake Superior division, St. Paul and Duluth road, 348 tons; on the second district, Lake Superior division, from Duluth west, 512 tons; on the Minnesota division, 540 tons. Adding these four together and then dividing by 4 gives us an average of local train tonnage on the main line of 435 tons per train as against the 309 net tons per train shown on the branches themselves—about 25 per cent heavier loading on local trains than on branch-line trains in the state of Minnesota,—which would in-

dicate the heavier cost per ton mile of train service on the branches. It might then be objected that having this smaller tonnage passing over the branches, the maintenance of road and structures would be conducted on the branches at a very much less cost than the maintenance of way and structures on the main line. If we take the train mileages from the A. S. & M. A. statement for October, we find the train mileage on the branches to be 62,557 and on the main line 234,103. If we take the total cost of the maintenance of road and structure items on Tables 1 and 2, which are covered by this train mileage, we have a cost for the main line of $1,334,801.83, which divided by the 234,000 train miles gives a cost of $5.70 in maintenance of way and structures. If we then take the similar cost for our branch line roads and apportion that by the train mileage, we get a cost of 6.64, showing that the maintenance of the way and structures per train mile on the branch line was still greater than the cost of the main line per train mile, which is a rough way of showing that the excess of cost (as has been testified in this case by Mr. Elliott, and I believe by Mr. Ward,) is on the branch line, and that therefore bringing the cost of the branch line per ton mile for train movement over into the main line and applying it to local train movement on the main line is giving an excess cost to that service on the main line and therefore to that extent favoring the Railway's contention in the matter of excess cost of intrastate over interstate, due to the fact of the proportionate amounts of those businesses, inter and intra, in the state of Minnesota, carried respectively on through and local trains.

Q. Upon your cross-examination, considerable time was devoted to the propriety of using revenue-train mileage for the purpose of dividing certain common items. Without taking time to ascertain what items are divided by the use of the revenue-train mileage, some of the items are so divided by the

Northern Pacific Company upon its books between freight and passenger?

A. Yes, sir.

Q. As I understood you to say, that is dividing a utility by the use made of the utility?

A. That was the intention, of making that division, yes, sir.

Q. That the product of the utility was the revenue ton-miles?

A. Yes, sir.

Q. You insist that where train mileage is used, switching should be included, as I understand it?

A. If that is used as the factor, switching must, most certainly, be included.

Q. Why?

A. That has been very well expressed, and if you will allow me to quote from a memorandum and from this book, I will do so. The Northern Pacific have divided—

Mr. BUTLER: Can you cite the authority you are reading from?

WITNESS: Yes, sir.

Mr. O'BRIEN: He is using his own memorandum.

WITNESS: Yes, sir; and I will quote the authority when I come to it as I go along. It is the Buell case. The Northern Pacific, as has been stated, divided a number of common expenses between freight and passenger on the revenue-train-mile basis. It is evident from the nature of the operation of the railway company that this omits a large item of expense which is incurred in the switching.

Q. That is, in other words, a part of the use that is made of the track is to switch cars and trains over it, is it not?

A. Yes, sir.

Mr. BUTLER: That depends wholly upon what division you are speaking of.

Mr. O'BRIEN: We are going to come to that, Mr. Butler.

Q. But part of the use that is made of the road and structures is for switching purposes, is it not?

A. Yes, sir. Part of the fuel burned, wages,—

Q. So that if you are going to make the use of the utility the factor, the entire use should be included?

A. Yes, sir.

Mr. BUTLER: Do you divide fuel on a train-mileage basis—Does the Northern Pacific? He uses that as an illustration.

WITNESS: Yes, sir. I will illustrate that, I will come to that point in a few minutes, Mr. Butler. It occurs a little later on and if you will wait I think that that will be answered there. It so happens that in a certain computation that matter does come up and that question will be answered.

On page 89 in the Buell case there appears the following statement, which is made with reference to the Chicago, Milwaukee & St. Paul road: "Sometimes the switching mileage, which, as stated before, is practically all freight mileage, is included in the revenue-train mileage when this mileage is used as the basis upon which to separate expenses between passenger and freight. This is an important modification of the train-mile basis, and the change would on the whole tend towards a fairer division." In the same paragraph the following occurs: "The switching mileage, as a whole, is costly." On page 90, the case continues: "As has already been said, switching expenses are practically all a freight expense, and should therefore, be included in the cost of the freight traffic." At the foot of the same page, "In the apportionment of the expenses which depend upon the train mile, the switching mileage should be included in the freight-train mileage, and that in apportioning those expenses which depend upon the cost of train mileage the cost of the switching mileage should be included in the cost of the freight-train mileage." On page 105, in speaking of the division of maintenance of way and

structure accounts, it is further stated, "The revenue-train mileage, however, is not the only mileage that should be considered. The switching mileage is of almost equal importance Switching trains are not always as heavy as revenue freight trains, but they stop and start and consequently slip more frequently than any other class of trains; and this causes more damage to the track than anything else connected with train movement. A switching-train mile is probably as injurious to the track as a revenue-freight-train mile." On page 106, at the bottom of the page, last paragraph, "For these reasons it was concluded that the cost of the maintenance of way which depends upon the traffic should be apportioned between freight and passenger on the basis of the revenue-train mileage, including switching mileage on some basis in the freight-train mileage."

We then come to the division of the first table on page 107, which was quoted in the cross-examination, and we find that in that table there has been a computation made apportioning the passenger expenses on the two bases,—one is including the entire amount of the switching, mile for mile, in the revenue-freight-train mileage, and making the division on that basis; the other is counting two switching miles as equal to one revenue-freight-train mile and the computation made on that basis. In the final computation, however, as shown upon the first table on page 108, the Wisconsin case uses the full amount of switching, mile for mile, on a revenue-freight train and adopts that basis of division. I therefore think that, in view of this analysis made in the Buell case, and also from the evident fact that expenses do accrue, must accrue and cannot help but accrue on the switching mileage, any division or any method of division in which the train mileage is used as a basis must include switching.

Q. If switching is to be included in the revenue-train mile-

age, it must be assigned to freight and passenger upon some basis, I presume?

A. Yes, sir.

Q. State whether or not you find any evidence as to the basis used by the Northern Pacific Company itself in assigning the expenses connected with switching to freight and passenger where those expenses are necessarily common.

A. Yes, sir, I find evidence that there has been an allowance made to passenger from the switching accounts; whether intentionally or how it was arrived at, I don't know, but I will make that computation.

Q. Please give the instance.

A. Well, if we refer to page 69 of the annual report of the Northern Pacific Railway to the State for the year ending June 30, 1907, we find, in their statement of the fuel burned, first, that the passenger engines consumed 87,648 tons of coal and that the average cost of this coal was $2.995, which makes the passenger coal cost $262,505.76; we find, second, that the switch engines consumed 93,512 tons of coal at the same price ($2.995) which equals $280,068.44. If we assume that six per cent of this switching was due to passenger, we obtain $16,804.11 as the passenger proportion. If we add this proportion to the amount already found as consumed directly by passenger engines, we have a total charge to passenger of $279,309.87. The amount charged by the Northern Pacific Railway Company to passenger on the basis of use by engines is $279,305.06, or within $4.81 of the amount which we have found by this computation.

Q. That is the amount found in item 23 of Table 4?

A. Yes, sir.

Mr. BUTLER: Fuel for locomotives?

WITNESS: Yes, sir.

Q. Where there is assigned to passenger $279,305.06?

A. Yes, sir. This, of course, is an indication that six per

cent of the switching was assigned to passenger, however that computation was arrived at.

Q. Have you made the same computation with reference to repairs to locomotives?

A. Yes, sir. As further confirmatory of the above percentage of switching, we will take the repairs of locomotives. Page 69 of the annual report of the Company to the State shows that the total engine mileage, exclusive of construction, was 7,331,550, of which 1,940,223 was passenger and 2,204,809 was switching. If we then take six per cent of this switching mileage, which was the basis we found in account 23 in order to obtain the amount which we should apply to passenger, we find that it amounts to 132,288 engine miles. If we add this 132,288 engine miles to the above mentioned 1,940,223 passenger miles, we have a total charge to passenger-engine mileage of 2,072,511, which is 28.268 per cent of the total mentioned above of 7,331,550 engine miles. By reference to Table No. 1, account 47, repairs of locomotives, (on the extreme right-hand side of Table 1,) we find that the total is $435,850.68—Northern Pacific Railway figures—which have been accepted. If we then take 28.268 per cent of this item ($435,850.68) we have, as chargeable to passenger, $123,206.27. If you refer now to Table No. 4, double-column 1, you will note that the Northern Pacific Railway assigned to passenger traffic $123,085.74, a difference of $120.53. Taking these two items, treated in the same way, it seems evident that, however they obtained the result, the Northern Pacific have allowed about six per cent of the switching to passenger account.

Q. You allowed five per cent?

A. I allowed five per cent, yes, sir.

Recess until 2 P. M.

AFTERNOON SESSION.

Q. I understood you to say, Mr. Hillman, that your examination of the accounts of the Minneapolis & St. Louis road developed the fact that upon that road 5 per cent of the switching mileage was assigned to passenger business?

A. It was within a very small fraction the percentage of 5 per cent, and so close to 5 that I took the 5 per cent.

Q. Now, if the switching mileage was assigned to freight- and passenger-train mileage upon the basis of the cars, freight and passenger switched, what percentage would have been assigned to passenger business?

A. 23.44 per cent.

Mr. BUTLER: On the basis of cars switched?

WITNESS: On the basis of the cars necessary for the use of handling the traffic.

Q. Now, will you explain what you mean by that?

A. In carrying the number of tons, as stated by the Northern Pacific in their statistical statements in the annual report, we find that in order to carry their tonnage, the average carload, it would take so many freight cars; we also find that the average of the empties upon the train would be a certain figure; we then add to this percentage which would carry the freight, the percentage of the empties carried in Minnesota; we then take the passenger mileage and the number of passengers and the number of passengers per car, which is also shown in their statistical statement, and from that we deduce how many cars would have to be used to handle those passengers. On that basis the relation is 23.44 per cent passenger and 76.56 freight.

The MASTER: That is, of total freight and passenger?

Mr. O'BRIEN: Cars.

WITNESS: Of the total cars, yes, sir. That is, to handle the passengers would require that many cars, in the way of cars run for passengers, and that many cars for freight, supposing

they had all been offered at one time, or, if they had been offered it would require one car used over that many times or that much use of car to do it. And when I first made the computation for the division between freight and passenger, I didn't have at hand or worked out this data to make the estimate of the switching, and in dividing Account No. 5, switchmen, flagmen and watchmen, as far as the switching went I used this 23.44 per cent for that division as the passenger percentage. When I found the other factor, I used it; but, as my attention was called in my cross-examination, I did not go back and correct that factor of switchmen on the 5 per cent instead of the 23. That would have decreased my passenger expenses by $13,135.34. It is a clear oversight on my part that I did not make that correction, and Mr. Butler called my attention to it in the cross-examination.

Q. What difference would it make in the amount of expenses assigned to passenger if the switching mileage was assigned to passenger business on the percentage which you have just given, 23.44?

A. That percentage is being worked out in my office now. I have in my notes here, that I also present herewith, as requested by Mr. Butler in the cross-examination, a division between freight and passenger on a train-mile basis including switching, but on the assumption that 23.44 per cent of switching is a passenger item. That table is not yet completed.

Q. Now, it appeared that you included in your train-movement cost, as found by items 10 to 27, certain switching expenses which did not belong to train movement, and that Item 5, which related exclusively to switching, was not included; so that it appears that you either should have included Item 5 in what you have called your train-movement expense or eliminated that portion of items 10 to 27 pertaining to switching. What have you to say with reference to that?

A. In bringing over the items 10 to 27 from the branch

lines and applying that cost to the main-line local-train movement, I overlooked the fact that the switching mileage on the branch was less than the switching mileage on the main line, and, therefore, as the "fuel for locomotives, other locomotive supplies, and the wages of engineers and firemen," engaged in switching service was included in those items 10 to 27, by that much I had brought over the wrong figure from the branch lines to apply to the main line. Raising the switching mileage on the branch line to the average on the main line adds $23,887.69 to the cost of items 10 to 27 on the branches. This cost was $264,545.62; adding the $23,887.69 to that, it amounts to $288,433.31, which divided by the ton mileage gives .2335 cents as the cost of the branch-line movement and as the figure applicable to the local-train movement on the main line instead of .2142 cents as shown in Division B of Table No. 6. Making the subsequent computations on this basis, we arrive at the fact that the train cost of through to local is on the basis of 100 to 202, as against 100 to 180, as shown in Division C of Table No. 6. Following this out to the end of the computation would add $6,255.14 to the cost of the intrastate business.

Q. Over the amount shown upon Table 7?

A. Yes, sir.

Q. Have you prepared a table showing what would be the result of dividing the total operating expenses in Minnesota between freight and passenger?

Mr. BUTLER: At the bottom of Table No. 6, Division D, the last entry on the bottom, reads, "Divide 1.1676, cost inter, into 1.4393, cost intra, equals 1.2327, or, intra train work costs 23.27 per cent more than inter." What effect would the modification of your original figures by the change referred to in your last answer have upon that relationship, if you can tell me?

WITNESS: I didn't quote that figure, because I didn't happen to have that on the paper where I had made the computa-

tion. It is 1.285, or 28.5 per cent instead of 23.27.

Mr BUTLER: : It will save trouble at the time of re-cross-examination if the details of these computations made for the correction or modification of the original exhibits be furnished.

The MASTER: At the present time?

Mr. BUTLER: At re-cross-examination.

WITNESS: I beg your pardon, that is on this paper; I had overlooked it; it is at the top. 28.5 is the correct percentage.

Mr. BUTLER: I still want the details of that.

WITNESS: Shall I quote the details now?

Mr. O'BRIEN: Yes, if you like; I would be very glad to have him do it in the record.

Mr. BUTLER: Yes, and give them full enough so that an ordinary man can follow the computations.

Q. Dictate your computation, and then it will be on the record, and Mr. Johnson or Mr. Butler can examine it.

A. Referring to Table No. 5, we note that 17,037,901 of intra ton miles moved on through trains, which moved at a value of 100; that 20,749,273 intra ton miles moved at a value of 202.

The MASTER: Local trains?

WITNESS: Yes, sir, local trains. Reducing these, we find that the total 37,787,174 intra ton miles moved at an average of 156; following the same method with the interstate traffic, we have 171,597,953 inter ton miles moving at 100; we have 45,470,933 ton miles moving at 202. Making the computation we have the 217,068,886 inter ton miles moving at 121.4; dividing the 121.4 into the 156, as shown in the computation of the intra ton miles, we have the relation of 1.285, or 28.5 per cent more to do intrastate business than inter business in the state of Minnesota. That is as far as I have the figures on this computation. I will take my working papers and make them up.

Mr. BUTLER: As I understand you, Mr. Hillman, in your direct-examination, you defined train-movement cost as a movement on trains after they were made up for that freight and passenger; what I intended to ask, and what I think I did ask you to do, was to give me your result omitting the cost of switching, not averaging it but omitting it; and if you have those figures or the computations of them we would like to have the results on that basis.

WITNESS: I have not made it on that basis. I made it by the method of equalizing the switching and not by excerpting the switching.

Mr. BUTLER: I observed the difference between what you did and what I intended to ask.

WITNESS: If you desire, I will make it on that basis, Mr. Butler.

Mr. BUTLER: I would like to have you do it very much.

WITNESS: All right, sir.

Q. Have you prepared a table showing what would be the result if the freight and passenger earnings upon the Northern Pacific road, shown upon the books of that Company, for the year ending June 30, 1907, were divided upon the bases used by the Northern Pacific Company, with the exception that the state was treated as a unit rather than dividing those expenses by divisions?

A. Yes, sir; I have made that statement, and have it here, together with—

Mr. O'BRIEN: Statement produced, entitled "Northern Pacific Railway Company, 1906-7." (Offered in evidence, and marked Defts' Ex. 3-N— Hillman.)

Q. The first double-column following the heads of accounts is the duplicate of double-column No. 1 on Table 4 of Exhibit 3-M?

A. No, sir.

Q. If I am incorrect in that,—what is the first column on this exhibit?

A. It shows the operating expenses of divisions in Minnesota, freight and passenger, the Northern Pacific method, but using Minnesota train mileage as a unit in lieu of the operating-division method used by the Northern Pacific, for comparative results to show the effect of the unit application. The allocations are accepted wherever made. By reference to the totals of first double-column on this exhibit 3-N, you will note that the total amount on the unit moved, chargeable to freight of the operating expenses, amounts to $5,547,123.24; on double-column No. 1 of Table 4, Ex. 3-M, the same figures amount to, on the divisional basis, $5,545,511.70. The passenger, on Ex. 3-N, in the first double-column, the unit method, amounts to $2,171,245.90; on the divisional method, as set forth on double-column No. 1 in Table No. 4 of Ex. 3-N it appears as $2,172,857.44, a discrepancy of about $1,611 out of a total operating expense of $7,700,000.

Q. Explain double-column No. 2 on Ex. 3-N.

A. Double-column No. 2 on Ex. 3-N represents the operating expenses on all divisions in Minnesota, freight and passenger, on the train-mileage basis, including switching, 5 per cent of the switching being treated as a passenger item. The Northern Pacific allocations are accepted. Dividing on this method it amounts to $5,828,840.36, chargeable to freight and $1,889,528.78 chargeable to passenger.

Q. In the first column of Ex. 3-N, you have taken the record of the Northern Pacific and have followed their method, except that you have treated the state as a unit; in double-column No. 1 of Table 4 is found the same method, except that the state is treated divisionally?

A. Yes, sir.

Q. So that the first column of Ex. 3-N should be compared with the first double-column of Table No. 4 for the purpose of

determining whether or not it would make any difference in the result if the state were treated as a unit rather than divisionally? Is that correct?

A. That is right.

Q. Then, in the second double-column of Ex. 3-N, you have divided the expenses on the revenue-train mile switching included, 5 per cent assigned to passenger business?

A. Yes, sir.

Q. And have also treated the state as a unit in that case?

A. Yes, sir.

Q. So that second double-column 3-N is to be compared with double-column No. 4 in Table 4 for the purpose of determining what difference there would be between your method of dividing these expenses and if they were divided on the train-mileage basis including switching, 5 per cent assigned to passenger and the state treated as a unit?

A. Yes, sir.

Q. State whether or not you have computed these same expenses and made this division of these expenses upon the same theory as shown in the second double-column 3-N, with the exception that the state is taken by divisions rather than considering the state as a unit.

A. Yes, sir, I have.

Q. Produce that.

Witness produces statement.

A. As the matter covered a number of sheets, I have simply in this next table quoted the totals of each general division of the operating accounts instead of making them in the long detail.

Mr. O'BRIEN: Statement produced entitled "Operating Expenses—All Divisions Minnesota, Freight and Passenger. Train Mileage Basis including Switching (5 per cent Switching treated as Passenger) Northern Pacific Allocation Accepted, using Operating Divisional Methods for the Purpose

of Checking with Minnesota Unit Division," and marked Defts.' Ex. 3-O—Hillman.

Q. Ex. 3-O—Hillman is to be compared with the second double-column on Ex. 3-N—Hillman, is it not?

A. Yes, sir.

Q. And state what the result is of the method shown on Ex. 3-O—Hillman with reference to freight and passenger.

A. As shown on second column of Ex. 3-N, the freight amounts to $5,828,840.36; as shown upon Ex. 3-O, the freight amounts to $5,821,380.82,—a difference of $7,459.54. The passenger on Ex. 3-N, second column, amounts to $1,889,528.78; on Ex. 3-O to $1,896,988.32—a difference in passenger of $7,459.54. The reason, probably, that this difference varies somewhat from the other and is in large amount is that in taking off the allocations which it was necessary for me to accept in this case, I did not have a notation as to whether those allocations occurred upon the branch lines or upon the main line, and that therefore I assumed that they occurred on the main line and divided the balance on the main-line divisional percentages between freight and passenger including switching on the basis which we have stated, and leaving the branch lines to be divided upon the basis of the relation of the train miles without allocation, as I did not have the allocations for the branch lines. This was a slight source of error, in that, as the percentage attributable to passenger on the branch lines was generally a little higher than that attributable to them on the main line, and for that reason there is a little greater difference here than would be shown, as in the Northern Pacific method they of course had the allocations on the branches. I did not consider it of enough importance for the confirmation of this unit method to go over and re-check allocations to get them to the branch. It shows a difference of less than one-tenth of one per cent of the total and is confirmatory of the unit basis.

Q. Calling your attention to the first column of Ex. 3-N, —so far as you know, is there any difference in the method used by the Northern Pacific Company in dividing freight and passenger expenses in Minnesota and that used by you in preparing the first column of Ex. 3-N, except that the Northern Pacific separation is first made upon each separate division and that yours is made by treating the state as a unit?

A. No, sir.

Q. Calling your attention to second double-column on Ex. 3-N, so far as you know, is there any difference between the method adopted by you in preparing double-column 3-N and that adopted by the Northern Pacific in separating the freight and passenger expenses upon its books, except that you have included switching, assigning 5 per cent thereof to passenger business for the purpose of dividing such common items as are divided by the Northern Pacific Company upon the train-mileage basis and except that you have again taken the state as a unit?

A. No, sir.

Q. Calling your attention to Ex. 3-O—Hillman, state whether or not there is any different method used, so far as you know, in preparing that table from that used by the Northern Pacific Company in separating its freight and passenger expenses as shown by its books, except that where such items are divided upon the train-mileage basis you have included switching assigning 5 per cent thereof to passenger.

A. No difference, as far as I know, save the fact that I mentioned, that certain allocations made by the Northern Pacific have been treated as if they occurred on the main line and not on the branches, while undoubtedly a percentage of them did occur on the branches; and I did not go back to check those out.

Q. You think that result would be negligible, do you?

A. It probably accounts for the difference which shows be-

tween the reconciliation on the straight Northern Pacific basis between the unit method and the divisional, and the amount shown as a difference between the second column of Ex. 3-N and Ex. 3-O, which amounts to about $4,800 of a further difference between the reconciliations.

Q. Then, in making these computations shown upon Ex. 3-N and Ex. 3-O, all the questions relating to weather-stress, or the use of gross earnings, or any other factor than that used by the Northern Pacific, with the exception of the switching, have been eliminated?

A. Yes, sir.

Q. And the effect of that elimination is shown in the amount of the difference arrived at on these tables?

A. Yes, sir. You mean, of course, in my Table No. 4 in Ex. 3-M, and these tables.

Q. I read from page 3419 of the record, Mr. Elliott's testimony, on the 74th day's hearing, commencing near the middle of the sixth line from the end of that page: "and these various items that I have indicated, all lead me, very conclusively, to the conclusion—which I have not arrived at since I came to Minnesota, because I had it in Missouri and had it before these rate cases came up—all lead me to the conclusion that the so-called local short-haul intrastate business costs anywhere from three to six or seven times as much as the so-called long-haul through interstate business." Mr. Hillman, what was the total ton miles upon the Northern Pacific railway in Minnesota for the year ending June 30, 1907, as shown by its report to the Railroad and Warehouse Commission? and please give the page of the report.

A. It is shown, I believe, on page 61-A, and amounts to 1,229,128,795 ton miles.

Q. If, as claimed by Mr. Johnson in Johnson's Ex. 54, 12.33 per cent of that was intrastate, please state the number of intrastate ton miles in Minnesota during that period.

A. 151,551,581 intra ton miles.

Q. Leaving inter ton miles of how many?

A. 1,077,577,214.

Q. Turning to Table No. 5 of Ex. 3-M, state what percentage of intrastate business was entitled to be carried upon local trains, and the amount.

A. 54.91 per cent.

Q. Making the total intra ton miles how many?

A. On local trains, 83,216,973; and leaving for intrastate on through trains 68,334,608.

Q. As shown by Table 5, what proportion of the interstate ton miles was local? First give the per cent, and then the total amount.

A. The percentage is 20.948; the amount is 225,730,875 local ton miles.

Q. And through?

A. 851,846,339 through ton miles interstate.

Q. Now, of the total ton miles reported in that year, as you have said, that would give how many ton miles through and how many ton miles local, of both state and interstate?

A. It would give 308,947,848 ton miles, local trains; it would give 920,180,947 ton miles, through trains.

Q. Will you now multiply the local tons by four, upon the theory that the cost of moving one ton local freight would move four tons of through freight.

A. Multiplying the local ton miles by four gives 1,235,791,392 as the through ton miles equivalent of the local ton miles on the basis of 4 to 1.

Q. Add to that the through tons.

A. Adding to that the through tons, 920,180,947, gives a total of 2,155,972,339.

Q. Ton miles, equated as you have described?

A. Yes, sir, equated to the through movement.

Q. What were the total operating expenses reported by the

Northern Pacific road for freight during the same year?

A. The operating expenses, eliminating switching, Account No. 6, which we have spoken of,—

Q. How much was that?

A. $40,338.19—amount, according to the Northern Pacific figures, as shown in Table No. 4 of Ex. 3-M, double-column No. 1, to $5,505,173.51.

Q. Now, will you divide the total ton miles equated as I have said, 2,155,972,339, into this total cost of $5,505,173.51; or, if you have already divided it, tell me what the result is.

A. The result is .25535 cents.

Q. And that represents the cost of what?

A. Of a through ton mile.

Q. If we multiply that by 4, will we have then the cost of a local mile, upon this assumption?

A. Yes, sir, upon this theory.

Q. And that gives the cost of a local mile at how much?

A. 1.02138 cents for the local mile. I would say there that that comes from the discarding of a decimal there, away at the end.

Q. Now, if there were 83,216,973 ton miles of intrastate freight moved locally at this cost you have given, what was its total cost?

A. $849,961.52.

Q. And if there were 68,334,608 ton miles intrastate freight moved upon through trains at the through cost, what was the total cost of that?

A. $174,492.21; making a total for both through and local business, intra, of $1,024,453.73.

Q. Then, on that calculation, the cost of intrastate business was the figure you have just given us, $1,024,453.73?

A. Yes, sir.

Q. And the cost of intrastate freight business, as shown by you on Table 7 of 3-M, is $1,182,490.89?

A. Yes, sir. You understand, of course, Mr. O'Brien, that the amount shown by me on Table No. 7 is on the basis that 14.83 per cent of the total freight traffic was intrastate The computation we have just made is on the basis of the 12.33 per cent, as shown in Mr. Johnson's figures, and finally adopted by us on the statement on Ex. 3-L.

Q. Now, in making this computation, you have accepted the tonnage as reported by the Northern Pacific Company, the proportion of that tonnage which was intrastate as claimed by Mr. Johnson in Ex. 54?

A. Yes, sir.

Q. And the total operating expenses assigned to freight, as appearing upon the Northern Pacific books?

A. Yes, sir.

Q. If you followed your own conclusions with regard to the amount of intrastate freight in Minnesota, and in all other respects made the computation upon the same method, what would you then find that the intrastate freight cost on this basis of 4 to 1?

A. If I followed my own percentage of the tonnages as assignable to intrastate and used my own division of operating expenses on this basis of 4 to 1, worked in a similar way, the operating expenses to intrastate would be $1,301,190.74, which figure can be compared directly with the results as shown upon Table No. 7, of $1,182,490.89.

Q. If these computations were made in the same manner upon the minimum basis as stated by Mr. Elliott of 3 to 1, what would the result be? I don't mean in actual figures, but would it lower the amount charged to the intrastate freight, or raise it?

A. It would lower the amount charged to intrastate.

Q. Have you made a computation upon the basis given by Mr. Johnson this morning, which I interpret to mean that all of the business in Minnesota, including all of the local inter-

state business in Minnesota, costs so far as train movement is concerned, two and one-half times per ton the cost of through interstate business?

Mr. BUTLER: I think he said all of the interstate compared with all of the intrastate; I think he said that to the Master and to you.

Attorney General YOUNG: No, he said that all the local interstate should be included with the intra.

Mr. BUTLER: I understood him that way.

Mr. O'BRIEN: I think that Mr. Johnson did use some language which might bear that interpretation, but I think also that his entire testimony taken together fairly bears out the view that I have expressed. I would like to have a computation on that view, anyway; I don't think it has been made yet.

A. You mean using the factor 2½ instead of the factor 4, which I used a few moments ago?

Q. Yes, but applying that factor to the through interstate business, as compared with the local interstate business and the total intrastate business. I don't think you have ever made that computation.

A. No, sir, I have not.

Q. Well, make it now. The total ton miles, as you have stated, were 1,229,128,795?

A. Yes, sir.

Q. 12.33 per cent is 151,551,581?

A. Yes, sir.

Q. Leaving as interstate ton miles 1,077,577,214?

A. Yes, sir.

Q. Of the interstate business there was, as shown by you on Table 5, 225,730,875 tons of local interstate business?

A. Yes, sir, on the percentage derived from Table 5 applied to the year's business.

Q. If that is added to the intrastate business, we would have total ton miles of 377,282,456, which is all of the intra-

state business added to all of the local interstate business in Minnesota?

A. Yes, sir.

Q. Now, please multiply that sum (that is, the sum of the intrastate business and the local interstate business) by 2½.

A. 943,206,140.

Q. Add to that the through interstate tonnage of 851,846,339.

A. It gives a total of 1,795,052,479.

Q. Now divide that amount into the total operating expenses assigned to freight $5,505,173.51.

A. .30668 cents.

Q. That is the cost of the through interstate freight, is it?

A. Yes, sir.

Q. Now multiply that by 2½, and give me the cost of the remainder.

A. .7667 cents.

Q. Please multiply all of the intrastate tons, that is, 151,551,581, by this highest cost which you have given, and state the result.

A. $1,161,945.97.

Q. That is as compared with $1,182,490.89, as found by you on Table 7?

A. Yes, sir, but Table 7 is, as you understand, on the basis of 14.83, while this computation is on a basis of 12.33.

Q. That is true, Mr. Hillman, but it doesn't make any difference, to my mind, whether this matter is proved on Mr. Johnson's testimony or on yours.

Mr. BUTLER: Might I ask a question at that point?

Mr. O'BRIEN: Certainly, I should be very glad.

By Mr. BUTLER:

Q. The figure last referred to in the last column on Table 7, the $1,182,490.89, is your estimate of the total cost of doing the intrastate freight business?

A. Yes, sir.

Q. What is the figure that you arrived at by your recent computation in your testimony here?

A. Just now, sir?

Q. Yes.

A. $1,161,945.97.

Q. That was on the relation of 2½ to 1 for what, according to your computation?

A. 2½ for all intrastate business, and for that proportion of the interstate business which traveled on local trains.

Q. Mr. Johnson's testimony this morning, when he gave that relation, stated that he desired to emphasize that the 2½ applied to only a certain portion of the operating expenses, as I understood it. In you computation do you apply it to all of the operating expenses?

A. That is applied in this computation to all of the operating expenses.

Q. He referred to the hauling expenses. You have characterized certain expenses as hauling expenses, as I understand it; your 10 to 27 items include that; am I right?

A. Yes, sir.

Q. And they also include about a half million dollars for switching in addition to hauling, as you defined it?

A. I don't remember the exact amount for switching, but I believe that is correct.

Q. What percentage of the whole operating expenses is the haulage operating expenses, deducting switching, can you tell?

A. In the neighborhood of 30 per cent.

By Mr. O'BRIEN:

Q. Have you made this computation upon the basis of local business costing upon the average three times as much as through business? which we insist is a fair interpretation of Mr. Elliott's statement.

A. No, sir, I haven't; I made it on the basis of 2½ and 4 and 7, I can make it on that basis in a very short time, if you desire.

Q. There is no necessity, but if you have the result figuring it on the basis of 7 to 1, you had better read that into the record at this time, as it may be a matter of convenience.

A. In order to have them together, I will read them consecutively, though it may repeat some that have gone before.

Q. Now, so that we will understand this answer, this is based upon this theory, that local business as you have defined it, costs upon an average from 3 to 7 times as much per ton mile as through business as you have defined it; is that right?

A. Yes, sir.

Q. And that the through and local business upon the Northern Pacific road during the year we are speaking of, was, as found by you and stated in Table 5 applying the percentages in Table 5 to the entire year's business?

A. Yes, sir.

Q. Now, if you will, go on and give it.

A. The analysis, as shown by Table No. 7, shows the intrastate freight expenses at $1,182,490.89; using 2½ times as the factor and the relation between the cost of through business and local business and on the assumption upon which Table 7 is based that 14.83 per cent of the total business is intrastate business, the 2½ basis gives $1,147,728.47 as the cost of doing intrastate freight business; the factor of 4 to 1 gives us $1,301,190.74 as this cost; the factor of 7 to 1 gives us $1,470,446.91 as the cost of doing this business.

Q. I don't understand that you have made those computations upon the claim on your part that it does cost 4 to 1 or 7 to 1 or 3 to 1, simply taking those factors?

A. Yes, sir, taking those factors I have made the computation, assuming no responsibility for them outside of the fact

that they were derived from testimony which has been given in the case.

Q. Have you made a computation in which you take the entire cost assigned to freight of transacting the business upon the branch lines of the Northern Pacific road and assumed that that reflected the cost of the local business upon the main line?

A. Yes, sir, I made that computation.

Q. What was the total cost assigned to freight upon the branches by the Northern Pacific Company shown upon Tables 1 and 2 of Ex. 3-M?

A. That amounts to $793,797.23 for the branches in Minnesota and touching Minnesota, divisions overlapping.

Q. What was the total tonnage, what was the total ton miles?

A. As shown on Table No. 6, Division B, 123,505,303.

Q. Giving a total cost per ton mile of how much?

A. .64272 cents.

Q. Now, if the total intra ton miles, as claimed by Mr. Johnson, (151,551,581) were hauled at that cost, what would it give?

A. $974,052.32.

Q. The ton miles that you have given is the ton miles on the branches; do you know whether or not that includes the haul of the ton miles on the branches pertaining to Minnesota divisions which are in or out of the state?

A. Yes, sir, it does.

Q. So that you have used the operating expenses for the entire branches and the ton miles for the entire branches on the same basis?

A. Yes, sir.

Q. In this branch-line cost is there any proportion of the switching charges assigned to the branch lines?

A. Yes, sir, there is; about 20.74 per cent of the freight-engine mileage is switching.

Q. Well, is there the same proportion of the expense of switching assigned to the branch lines as is assigned to the main lines?

A. No, sir.

Q. What is the difference in the proportion?

A. About 2 to 1.

Q. Could you, without great difficulty, add to this total branch-line cost the same proportion of the switching cost which is charged upon the main lines?

A. Yes, sir.

Q. Have you done that?

A. Yes, sir.

Q. What would that give you as a total branch-line cost?

A. It would add $23,887.69 to the total you have given.

Mr. BUTLER: To the total of $974,000?

WITNESS: No, sir, to the total of $793,797.23 expenses, as shown upon the branch lines.

Mr. BUTLER: Plus equated switching would make it what?

WITNESS: $817,685.42.

Q. Now, if you will add that additional amount to the cost of transacting business on the branch lines, what will that give you as the cost per ton upon the branch lines?

A. .66207 cents.

Q. And have you multiplied all of the ton miles in the state by that?

A. I have multiplied the intrastate, as obtained by the application of Mr. Johnson's 12.33 per cent to the total ton miles, and that gives me $1,003,377.55, as the cost of doing intrastate business.

Adjourned until Thursday, July 29th, at 10 A. M.

FEDERAL BUILDING, St. Paul, Minn., Tuesday, August 3, 1909, the hearing was resumed at 2 P. M.

CONWAY W. HILLMAN,
recalled on behalf of defendants, testified:

By Mr. O'BRIEN:

Mr. O'BRIEN: I omitted to ask Mr. Hillman one or two questions and forgot one table that we prepared.

Table entitled "Northern Pacific Railway Division of Operating Expenses for Freight, Intra freight and Inter, year 1906-7," produced, marked "Defts' Ex. 3-P—Hillman," and offered in evidence.

Q. Calling your attention to Defts' Ex. 3-P—Hillman, will you please state what that is?

A. This exhibit is made for the purpose of showing the effect that the use of the Northern Pacific figures as shown in Table No. 4, column No. 1 of Ex. 3-M, would have when divided into inter and intra, freight and passenger; the second half (the other side of the red line on that exhibit) is to show what effect the same division would have on the figures in double-column No. 6, Table 4, Ex. 3-M.

Q. The first double-column on this exhibit is a copy of the first double-column on Table 4 of Ex. 3-M?

A. Yes, sir.

Q. The next two double-columns are the divisions of the items appearing upon double-column 1, between intra and interstate business upon the method adopted by you in the preparation of Ex. 3-M?

A. Yes, sir, for the freight items.

Q. In the second division of Ex. 3-P, the first double-column is a copy of double-column No. 6 in Table 4 of Ex. 3-M?

A. Yes, sir.

Q. And the two last double-columns are the division of that

amount on the method followed by you in the preparation of Ex. 3-M?

A. Yes, sir. I would say, if you will note in maintenance of road and structures items, that a large number of those being divided upon the same basis have been lumped and starred, which is indicated by the stars on the exhibit.

Q. In other words, this is intended to show what the result would be if your original methods were followed with the exception that, in dividing between freight and passenger in the first three sets of columns, the Northern Pacific division was accepted, and in the last three sets of columns what you have designated as the Peabody method, including switching, was adopted?

A. Yes, sir.

Q. And after leaving the division of freight and passenger, then you have followed and carried out your own methods?

A. Yes, sir.

Q. As they were originally?

A. As they were originally.

Q. And those methods are the methods which you described in your former direct and cross-examination?

A. Yes, sir.

Q. There has been no deviation from those methods?

A. None.

Q. Have you read your evidence, direct and cross-examination, since it was given?

A. Yes, sir.

Q. And are there certain matters you want to call attention to?

A. Yes, sir, there are some small corrections, and I will speak of them and then leave it to you gentlemen what to do about them. On page 3734 (transcript) there is an insertion there "He isn't watching you." It seems to me as if it was—I don't remember anything of that, and I don't know why it is there—

it seems totally irrelevant to everything that is stated, and Mr. Butler is quoted as mentioning it. It seems irrelevant to anything there, and I didn't see why it should be in unless there was some object. I don't remember anything about it. I was asked to make some computations and started on the computations, and this comes right in the question, and I thought I would mention it. It don't cut any figure, it seems to me.

The MASTER: I recollect some such expression as that.

WITNESS: On page 3755 I used the words "correspond with revenue ton-miles." What I should have said in that was "are to be compared with revenue ton-miles." There were two sets of figures, and I meant that in using revenue ton-miles in one figure you should use this same revenue ton-miles in the other set of figures, and I said that they corresponded instead of "they were to be compared with." I suppose it will be readily understood; it might lead to a little misunderstanding as they are not of the same values.

On page 3805 it is said "when that was determined, it was necessary to make an excerption of certain tonnages." It says "when it was determined to do that." The way it reads now, it seems as if when we had determined the amount we made the excerption and when it was determined that this error existed, it was necessary to make the excerption.

On the next line in 3805, it should read "and excepted" instead of "than excerpted."

On page 3807, the twentieth line, it reads "exception" instead of "excerption."

On the twenty-first line of page 3807 we should read "local rates" instead of "less rates."

On page 3828 we should read "14 tons," on the sixteenth line, instead of "14,000 pounds." That was where we were speaking of the old limit of loading of the cars, and it was entered as 14,000 pounds instead of 14 tons.

On page 3858, the fourth line from the top, should read

"statement" and not "shipment."

On page 3955, as I read it, the question says that there are two elements of error in it. As I remember the question it was two elements entering into it. It was concerning the tonnage on the Head of the Lakes movement. I wish that Mr. Butler could look at that and see which way he intended the question. That is about all that I have on that point.

The MASTER: If there is no objection, wouldn't it be well to have the Reporter turn back and make these corrections?

Mr. BUTLER: Well, I don't know what effect it might have, I am sure, without an opportunity to read this transcript in connection with the matters referred to in the statement just made by Mr. Hillman, and then perhaps we would be willing that that be done in all cases. It is clear that it might be done in some cases, but I am not sure about this last matter that is referred to.

RE-CROSS EXAMINATION

By Mr. BUTLER:

Q. Now, if from the items 10 to 27, which were referred to in your examination heretofore had, there were taken out the expenses of switch-engines and incident to the use of switch-engines, your Table 6 in your Ex. 3-M would be all changed except the first division of Table 6, would it not?

A. Yes, sir.

Q. Now, you have ascertained the amount of such expenses that ought to be taken out, have you not?

A. I have been advised by Mr. Johnson, of the Northern Pacific, of the amount of expenses which should be taken out on account of switching and find that the estimate which I made of those before I received his statement is within a few thousand dollars of one another, and therefore I am willing to accept the sum total of Mr. Johnson's exhibit of switching expenses.

Q. What was the figure eliminated in your subsequent

computations—the amount of switching expenses eliminated from items 10 to 27? Give it in round thousands, will be near enough.

A. Total on both main line and branches $520,000.

Q. If that sum be eliminated from the items 10 to 27, and divided on the basis that you divide the pay of switchmen in account numbered 5, the whole division, B, C and D, of Table No. 6 would be changed?

A. Yes, sir.

Q. And in Division D of Table No. 6 there would be substituted for 180 (being the relation of 100 to 180, in the third and fourth lines of that subdivision of Table 6)—would be changed to what?

A. 213.

Q. The relation would be 100 to 213 instead of the relation of 100 to 180?

A. Yes, sir. And I will say here that there is a little difference between Mr. Johnson and myself after we start with that excerption, and Mr. Johnson makes the figure 2.115.

Q. You made it 2.13?

A. 2.13 yes, sir.

Q. Well, disregarding the points, the relation as first stated was 100 to 180?

A. Yes, sir.

Q. And as you now make it, on the basis we have just referred to, would be as 100 to 213?

A. Yes, sir.

Q. And it would change your final result, would it not, as to the cost of the intrastate freight business?

A. Yes, sir.

Q. How much money would it increase the cost of the intrastate freight business?

A. $51,173.05.

Q. Over and above the figures shown as the expression of

that on your Table No. 6?

A. Yes, sir.

Q. And it would decrease the interstate cost in Minnesota the same as it increased the intrastate?

A. By that amount, yes, sir. I would say here that Mr. Johnson's figures are $59,184.35. That is due to the fact that when Mr. Johnson made up the figures for this switching he divided them between freight and passenger on a slightly different basis than I did. I stuck to the straight five per cent, and he made them up on his divisional percentages of what is called the engine performance sheet; and on that basis he assigned 7½ per cent to passenger business while I stuck to the 5 per cent, and that accounts for the difference of the $8,000 between our accounts.

Q. So a change from 5 to 7½ makes the difference that you refer to here by reason of this elimination from items 10 to 27 of the figures that you have stated?

A. Yes, sir.

Q. You and Mr. Johnson conferred about this matter here, just before your testimony?

A. Yes, sir.

Q. And the statement of your differences in these figures of nine or ten thousand dollars (whatever it is) is by reason of your consultation with him here now?

A. Yes, sir.

Q. There is one other matter I want to refer to, I think, only one—two, I guess instead of one. If 7½ per cent of the total switch-engine mileage be attributed to passenger engine business, instead of 5 per cent, as you attributed it, it would further change the result if it was used all the way through, would it not, because you have introduced the element of switch-engine into certain of your divisions between passenger and freight and between state and interstate?

A. Yes, sir.

Q. So that would change the result on all of your sheets?

A. Yes, sir, to a certain extent. I haven't examined as to the amount.

Q. We will not trouble about the amount. Now I think perhaps I may have been mislead, and by something I said myself in your principal cross-examination may have misled you: Switch-engine mileage is not a measured mileage, but is assumed on some arbitrary basis by all the railway companies, is it not?

A. It is, yes, sir.

Q. And, as a matter of fact, the enginemen on switch-engines are paid by the hour?

A. Yes.

Q. Without regard to the miles of performance?

A. Yes.

Q. That is, it is a sort of constructive or hypothetical mileage, is it not? That is, if there are so many hours it is counted so many miles, no matter whether they moved at all or not; isn't that it?

A. That is right.

Q. Whereas, the compensation of enginemen on the road-engines is on a somewhat different basis: if they make ten miles an hour, that is considered the performance; that is, 100 miles or ten hours; if they make more than an hour they are paid for more, and if they make less they are paid for the ten; isn't that the idea?

A. Yes.

Q. If they are held up, for example, and only make five or don't make any, they are paid for an hour, they are paid for ten miles?

A. Yes.

Q. But if they run fifteen miles in an hour they are paid for the fifteen?

A. I believe they are, yes, sir.

Q. There is that difference in the wage-schedule of the two classes of enginemen?

A. Yes.

Q. Now, six miles per hour is the standard allowance, is it not, for switch-engine performance, the country over, among railroads?

A. Yes, sir, wherever I have struck that it is six miles.

Q. And your computations assumed that the Northern Pacific switch-engine mileage was based on six miles an hour?

A. Yes, sir.

Q. I think I said that I understood that it was. You now find, as a matter of fact, do you not, that it was, during the year you were examining and all prior years, eight miles an hour, but since you examined, commencing with that date, it has been brought to the standard of the other companies and is figured at six miles an hour?

A. I can't recall. I have got that six pretty firmly fixed in my head. I don't recall whether they used eight on the prior year or not.

Q. On that year they used eight, didn't they, the year you figured, instead of six; never used six until the 1st of July, 1907, did they? That is, for the fiscal year ending June 30, 1908. That was the year immediately following the year you made your examination.

A. I couldn't say on that point.

Q. Can't you look in your minutes and let us have that fact?

A. There would be nothing in my minutes to indicate that.

Q. Well, it would make a very great difference in all of your results, wouldn't it, whether it was six or eight? Eight would increase the six by just 33 1/3 per cent, wouldn't it?

A. Yes, sir.

Q. And in so far as the switch-engine mileage becomes an element there, it would give it 33 1/3 per cent more potency

in all of the computations that it is used in than it ought to have, assuming that six is right?

A. Yes, sir.

Q. You couldn't tell, I suppose, without elaborate computations, how much that would change your final result, could you, either?

A. No, sir, you couldn't tell that without running over it.

The MASTER: Do I understand from this that switching mileage is not determined by measurement, but from the time the men are employed, without regard to the—

Mr. BUTLER: That is the way I understand it, your Honor.

WITNESS: And that has been arrived at, of course, as I understand it, by the computations of the various operating officials as to the amount of mileage that they would make.

Q. Many prominent railroad men have contended that four would be better than six even, have they not?

A. I have heard it as low as four, and I have heard it as high as eight or ten.

Q. Your own judgment is that the railroads on the whole have got it about right, at about six?

A. I couldn't say on that.

Q. You have no opinion about that?

A. I haven't at present, no, sir. I haven't got into the investigation of that as yet, and there are certain things you accept from the operating men without asking the reasons or investigating the reasons, and I couldn't say on that basis; but I should be inclined to accept it, for the reason that they are in position to know, and they ought to know, and there is no reason, that I know of, that they should either increase or decrease that amount.

Q. As you have used your divisions, the increasing of the miles per hour, suppose you had used twenty instead of eight, would have had what effect on your final result? Would it increase or decrease your intrastate cost? Can you tell off-

hand, from your familiarity with the manner in which the element was used in your arithmetical processes?

A. The mileage itself would only accrue between freight and passenger. If they were paid on the basis of the higher percentage, and thereby increasing the switching cost, it would, as I have handled it, increase the intrastate expenses.

Q. That is what I wanted to get at; I didn't want to get at the amount of it. Now, see if I understand that: Suppose this mileage had been made up on the basis of 16 miles per hour for switch-engines instead of for eight (that is just doubling it) and you had taken that figure and assumed it to be right, as you did with eight, that would have increased the intrastate cost and decreased the interstate cost, as you used the element?

A. Yes, sir, providing they had been paid on the basis of 16 miles an hour instead of 8 miles an hour.

Q. Every switch-engine crew is paid on the basis of the distance assumed?

A. Yes, sir.

Q. That is the uniform system the country over, isn't it? If it was 6 they would be paid on the basis of 6, and if it was 8 they would be paid on the basis of 8, and that is what the assumption is primarily for, isn't it?

A. That is the reason I put that explanation in, to bring that point out.

Q. I am reminded of the further inquiry, to make plain in general terms what I intended to cover, the change of the result from the elimination from the aggregate of items 10 to 27 of the switch-engine expenses, the figure which you have given us not only changes Table No. 6 in the matters referred to heretofore in your testimony this afternoon, but would also change the figures in Table No. 9 and Table No. 7?

A. Yes, sir.

Q. And would change everything pertaining to freight cost?

A. Yes, sir.

Q. In your computations.

A. We used the table figures from Table No. 7, both Mr. Johnson and I, in working out that statement. That is the way we got our totals of items 10 to 27 for Minnesota when we started to work it; so, of course, it would change Table No. 7.

Q. By the "statement" you mean the figure which you gave?

A. Yes, sir.

Q. To-wit,—what did you make it?

A. $51,173.05.

Q. And Mr. Johnson's basis made it—?

A. $59,184.35.

Q. Well, the whole of Table No. 9 would be changed by it, would it not?

A. Yes, sir, it would add so much to the expenses on Table No. 9, and also when you come to I believe it is Table 14, it would also carry forward.

Q. It would change every table relating to freight, division between state and interstate?

A. Yes, sir.

Q. It would not, of course, change the division between states or between freight and passenger?

A. No, sir.

Q. But it would change every figure relating to the division between state and interstate freight costs?

A. Yes, sir; in other words, it would add $51,000 to the intrastate cost and deduct $51,000 from interstate cost.

Q. That is how it would change the final conclusion?

A. Yes.

Q. But it would change all the figures leading up to that?

A. Wherever that figure was brought forward from Table 7 it would have to be changed right through to the end.

By Mr. O'BRIEN:

Q. Mr. Hillman, ordinarily locomotive engineers are paid

by the number of miles traveled by them, are they not, in the performance of their duties?

A. Yes, sir.

Q. In the case of engineers and firemen upon switch-engines, they are paid by the hour?

A. Yes, sir.

Q. The company computes or estimates the number of miles which will be traveled by the engineer and fireman in an hour?

A. Yes, sir.

Q. And that number of miles is placed upon the company's books as the switch-engine mileage, is it not?

A. Yes, sir.

Q. Do you know, of your own knowledge, what the estimate of the Northern Pacific was during the year ending June 30, 1907, as to the number of miles which the engineers upon switch-engines would make each hour?

A. No, sir.

Q. In your Table 3 have you taken the switch-engine mileage as shown upon the Northern Pacific books?

A. Yes, sir.

Q. And the switch-engine mileage, therefore, which appears in your computation is not a matter which you have determined or estimated or arrived at from any investigations which you made?

A. No, sir.

Q. You have simply accepted the Northern Pacific books upon that question?

A. That is right.

Q. I forgot to ask you (and I must apologize to the Master for such a piecemeal examination) whether or not you have made an examination of the table which Mr. Johnson presented in connection with his Ex. 54, I think, but which was not offered in evidence, in which the length of the haul of Minnesota intrastate business was computed by Mr. Johnson.

A. Yes, sir, I made such an investigation.

Q. Since your last testimony, Mr. Johnson has furnished you a copy of that statement, has he?

A. Yes, sir.

Q. Will you please read into the record your analysis of that matter?

Mr. BUTLER: I think the statement ought to be offered in evidence if that is to be done.

A. In my testimony, and in filing Ex. 3-L, I accepted the percentage of intrastate to the total business as 12.33, as shown in Mr. Johnson's Ex. No. 54. At the time of the cross-examination, the question arose whether or not in reducing my 14.83 per cent, which I had found as the intrastate, to the 12.33 per cent which Mr. Johnson had found as the intrastate, I was justified in excerpting earnings and tons on a parity with the ton-miles. I stated also that I had not examined at that time, nor did I have a copy of the detailed sheet which accompanied Mr. Johnson's Ex. No. 54.

Mr. O'BRIEN: For the purpose of clearness we produce the sheet which Mr. Johnson used.

The MASTER: By mutual consent, it may be marked "Master's Ex. No. 1."

The paper was so marked.

WITNESS: By reference to this detailed table, Master's Ex. No. 1, it will be noted that the average haul of all the freight originally charged to intrastate was 118.8 miles. This exhibit is for the months of October, 1905, and April, 1906. It shows that the average haul of that which was left in after taking out the interstate carried on intrastate conditions was 102.5 miles.

I now wish to file an exhibit furnished me by Comptroller Gray, of the Northern Pacific road, showing the original inter and intrastate tons, ton-miles and earnings for the year ending June 30, 1907.

Mr. BUTLER: What do you mean by "original" as you have used it in that statement?

WITNESS: I mean before any of the errors which have developed were taken out. That is, where the haul of the freight was considered the criterion by which it was adjudged as inter or intrastate and not its way-billing or its origin or destination; that is, if the Northern Pacific haul was intrastate, it is classed as intrastate freight.

Q. In other words, this was a statement furnished you by Comptroller Gray which was in accordance with the report, and contained the same error as the report to the State contained?

A. Yes, sir.

MR. BUTLER: I so understood it.

WITNESS: I would like to offer this as an exhibit.

The exhibit was marked "Defts' Ex. 3-Q—Hillman," and introduced in evidence.

WITNESS: By reference to this statement which has been marked Ex. 3-Q, you will note that the average haul on the original intrastate business for the months of April and October was 110.9 miles, and for the year 111.2 miles. The average haul shown by me on Table No. 5, was 114.3 miles. I will say here that I have been able to pick out from my basic papers, though they were not originally intended to convey that information, enough interstate upon tonnage of the kind that we have above designated, (viz., classed as intrastate, but really, under the late decision of the courts, being interstate,) to reduce the April and October percentage as per Table 5 to 14.11 instead of 14.83 as shown on Table 5.

Now, from the facts above mentioned, of the average haul, it is evident that in excerpting 52.36 per cent of the ton-miles and 44.7 per cent of the tonnage that Mr. Johnson has reduced the average haul of intrastate from 118.8 to 102.5, or about 13.7 per cent, while in reducing the amount shown on the tonnage statement Ex. 3-Q, just mentioned, I have found that the aver-

age haul increased from 111.2 to 114.3, or a little above 2 per cent. It is hardly reasonable to suppose that in making a reduction from 14.83 per cent to 12.33 per cent the difference between the average haul of over 14 per cent could accrue in that mileage; and therefore, having confidence in the mileage as taken off in my Table 5, I will have to stand on the basis that as far as the relations between inter and intra go as regards the tonnages and the classification of the tonnages, that that table shows the correct proportion. If you will now further refer to the matter of the earnings, a reference to Mr. Johnson's Ex. 54 and accompanying paper, Master's Ex. No. 1, shows that the average rate per ton per mile on all originally included as intrastate was .9299 cents; that that which remains in as intrastate was 1.1425 cents. By reference to Mr. Gray's table (that is, my Ex. 3-Q) the original ton-miles for 1907-8 for October and April were 53,939,163; the earnings were $536,-846.26, or .9953 cents per ton-mile. The total tonnage for the year, the annual report, was 1,229,128,795 tons, of which I have treated 14.83 per cent as intrastate, which makes the total ton-miles intrastate as treated by me on my tables of 182,279,-800; to which tonnage I apply the earnings as shown upon Table No. 8 of Ex. 3-M $2,075,514.90, or on the amount which I have retained my 14.83 per cent I show an earning per ton per mile of 1.1337 cents. In other words, in the freight earnings per ton per mile Mr. Johnson's excerption increased the earnings per ton per mile from the original figures of intrastate .9299 to 1.1425, while in my treatment to obtain the 14.83 per cent and the consequent earnings, I have reduced the original intrastate earnings from .9953 cents to 1.1377 cents. It is evident from this that in excerpting the earnings on a parity with the tonnage when I reduced from 14.83 to 12.33, that I have done no injustice to the Railway Company's contention, but, on the contrary, have given them the benefit of a small amount per ton per mile. The results, however, are close

enough to indicate the legitimate nature of my analysis of the account and confirms the fact that the ton-miles and earnings can be consistently excerpted on the same basis. In the matter of the tons, comparing the number of tons excerpted, I would say that it shows a difference of a little over 6 per cent between Mr. Johnson's excerption and mine. That is, if my analysis in the excerptation of tons had followed the excerptation which Mr. Johnson gave, I would have 6 per cent more tons than I have shown on Table No. 5, which fact was reflected by my longer ton-mile haul which Table No. 5 showed than the table furnished by Mr. Johnson. I mention these facts and this analysis to confirm the fact which was attacked in the cross-examination that I had a right to take out earnings and tonnages on the same basis, which I had done by deducting from the final result on Ex. 3-M to show what the result would be on Ex. 3-L, and I would say on this account that I could do so, and that I felt justified in doing so at first, which fact has been confirmed by this analysis. I was willing, having once established the operating per cent of the intrastate, that the amount of that intrastate should be increased or decreased as long as the relations which I had expressed in Table 5 were not disturbed.

By Mr. BUTLER:

Q. As I understand it, this method of computing switch-engine mileage affects your division of maintenance of way account between freight and passenger, for example?

A. Yes, sir.

Q. And it is essential, is it not, to the truth and real merit of all your divisions here because you have used it as one of the important factors in most of the essential divisions?

A. Yes, sir, it enters into quite a number of them.

Q. Now, do I understand, Mr. Hillman, that without even inquiring or ascertaining in any way how that mileage was computed, you assumed the figures as put on the books to be right?

A. Yes, sir.

Q. And since this matter has come up you haven't taken the trouble to find out how the Northern Pacific computes that mileage?

A. No, sir, I have not, beyond their instructions to the men.

Q. Now, when you were first cross-examined, did you understand at all how the mileage was gotten at? didn't you think it was measured?

The MASTER: Switching mileage?

Mr. BUTLER: Yes, switching mileage.

Q. And didn't you go into a long explanation telling us how it was measured?

A. Yes, sir, that was the method that would be taken in determining this matter originally by the parties who made the deal.

Q. Made the "deal"?

A. I mean made the figure upon which the amount of switch-engine mileage per hour should be based; that was in reference, if you will remember, to the amount of the passenger-switching mileage as against the freight-switching mileage.

Q. Well, I am talking about switch-engine mileage. Didn't you tell us, quite elaborately, how the distances were computed for the passenger-car miles in switching and for the freight-car miles in switching? and, my recollection is, also for the engine-car miles in switching by measurement. Didn't you do that?

A. That is just what I started to remark, that I had in mind the fact that the source from which I derived that 5 per cent switch mileage due to passenger was corrected from time to time by the division superintendent making an estimate of the mileage over which his cars were handled. That percentage of 5 per cent doesn't, on the M. & St. L., (from which I took it) always come out the same each year, because that is revised by the superintendent on some such basis as I outlined—very vaguely, I will admit—and I will say that the absolute per-

centage on the M. & St. L. is 4.67; that is my recollection of it now, and I think I am correct.

Q. Do they measure the distance traveled by switch-engines on any railroad that you ever heard of in your life?

A. No, it is all estimated, sir, or the bulk of it.

Q. Did you know, when you were cross-examined, that the switch-engine mileage statistics as to engines were based on time and not on distance?

A. Yes, I think I did.

Q. Now, will you, when you come here to testify again (in some other case, perhaps) in the mean time examine and verify from your examination the amount of mileage used by the Northern Pacific per hour for switch-engines to get at the switch-engine mileage upon which your computations offered in evidence depend? Will you do that for us?

A. Yes, sir, if you desire it.

Mr. O'BRIEN: Well, if that means a recalling of the witness again, I don't know when that will be.

Mr. BUTLER: He will be here, will he not, in the Minneapolis & St. Louis and Great Northern cases? and we can stipulate that then if he verifies it. He says he don't know about it and never gave it any attention. His whole account depends on that thing.

Mr. O'BRIEN: Oh, no; his whole account depends on your books.

Mr. BUTLER: Well, I supposed that the part that has been characterized the Hillman original method of division was justified by the facts and opinions of the witness.

Attorney General YOUNG: That is the division between freight and passenger.

Mr. BUTLER: Oh, no.

Mr. O'BRIEN: We have accepted the Northern Pacific books upon that figure. Now, if they desire to prove that their books are wrong, I think they ought to do it themselves.

Mr. BUTLER: We are not asking about the truth of it; we are asking how it was made up.

Mr. O'BRIEN: That is a matter for you to tell the Master.

Mr. BUTLER: I think I will ask Mr. Hillman if he will do that, inasmuch as the verity of all his divisions, both between freight and passenger and between state and interstate, as well as the divisions of his methods depends upon that, to ascertain what the allowance was in fact, whether twenty-miles or two or one, whether by measured distance or by time.

Mr. O'BRIEN: The question as to whether we can prove the facts in this case as to the expense of operating, doesn't depend upon that at all, because if their books are wrong they can show that. The burden is upon them to present the proof and show what the facts are. The claim that we have made here is the claim as to whether or not you can analyze railroad accounts and not as to whether the particular statements upon the books of the Company are right or wrong.

Mr. BUTLER: Mr. Hillman has told us what it costs to do intrastate business freight and intrastate passenger business, it is not a mere exposition of method, but he has told us what it costs.

The MASTER: Predicated on your books?

Mr. BUTLER: Yes, predicated on our books. Now, assuming that mileage is measured by distance or measured by time, would go, of course, to the correctness of the division, and I thought he would like to do that for us. If there is any objection to it, we can prove how the mileage was computed one year and how it was another.

The MASTER: Well, that is a matter between you and Mr. Hillman.

Q. Would you like to do that for us, Mr. Hillman?

A. I will be guided by what my counsel say in regard to that.

Mr. BUTLER: That is satisfactory.

Mr. O'BRIEN: Of course, we would be very glad to have that done.

Your Honor will remember that early in the case there were certain documents connected with the history of the Northern Pacific that were identified, I don't think they were offered in evidence, they were printed by the State, and copies have been furnished of all of them. We offer the report of the President and Directors of the Northern Pacific Railroad Company to the stockholders September 27, 1876; second, the organization or charter of the Northern Pacific; third, the reorganization; fourth, plan of reorganization; fifth, charter and certificates of Northern Pacific Railway Company; sixth, syndicate agreement; and, seventh, reports and accounts of J. P. Morgan & Co., as reorganization managers. I think that the last that I have mentioned was marked on the record Ex. W.

The printed volume containing offer was marked "Defts' Ex. 3-R."

Mr. BUTLER: It is objected to as irrelevant and immaterial.

Adjourned until Wednesday, August 4th, at 2 P. M.

FEDERAL BUILDING, St. Paul, Minn., Wednesday, August 4, 1909, the hearing was resumed at 2 P. M.

Mr. How: During the examination in chief of Mr. Baird in the Northern Pacific case I offered Ex. 36—Baird, which showed the present class rates in Minnesota as compared with the present class rates in Montana and the present class rates in Washington. Mr. O'Brien asked, at that time, if I was prepared to show the old class rates and thought I ought to do so. I think the record is susceptible of the construction to the effect that I undertook to do so. Now, I have had prepared an exhibit which is just like Ex. 36—Baird, identical with it in all respects except that, in addition to the matter contained

in that, there is contained the old class rates in Minnesota before the order took effect; and I ask permission (which counsel seem willing to grant if the Master will) to withdraw Ex. 36—Baird and put in "Ex. 36—Baird Substituted," showing that additional information.

Mr. BUTLER: Might we not leave them both in, because in examination you have referred to the original exhibit 36 and if that disappears altogether, that testimony won't hitch to anything? I don't know what the examination was.

Mr. O'BRIEN: Why don't you make it Ex. 36—Baird Supplementary?

Mr. HOW: I will do that. So far as the direct testimony is concerned, there is no question upon it that would not apply as well to the other one, but I will put it in as Ex. 36 supplementary.

The MASTER: I suggest that the Reporter note on the exhibit the page of the testimony where it is arranged that it shall come in.

THOMAS YAPP,

sworn on behalf of Defendants, testified:

By Mr. O'BRIEN:

Q. What is your occupation, Mr. Yapp?

A. Assistant Secretary of the Railroad & Warehouse Commission of Minnesota.

Q. And have been connected with that Commission for how many years?

A. Fifteen years.

Q. You reside in the city of St. Paul, Minnesota?

A. Yes, sir.

Q. Did you make an examination of the train-sheets of the Northern Pacific Railway Company for the purpose of ascertaining the method of moving what are known as the through

trains upon that road?

A. Yes, sir.

Q. By through trains I mean the trains carrying freight from St. Paul or Duluth to the Pacific Coast.

A. Well, not from St. Paul or Duluth, because these Coast trains are made up at Staples.

Q. Well, I know, but they contain the freight originating at the Twin Cities or Duluth and destined for Pacific Coast points?

A. Yes, sir.

The MASTER: Limited to those trains, or to that class of freight, is this examination? That is, it is through from St. Paul or Duluth to the Pacific Coast?

Mr. O'BRIEN: Yes.

The MASTER: It is a little different use of the word "through" than we have had.

Q. What I mean is, did you examine the movement of the regular trains upon the Northern Pacific Railway System upon which freight originating at Twin Cities or Duluth or points east of those places and destined for points upon the Pacific Coast were carried?

A. Yes, sir.

Q. Where did you make that examination?

A. In the office of the Superintendent of Transportation of the Northern Pacific Railway, in St. Paul.

Q. In whose presence?

A. I made the examination in the presence of Mr. McCauley, chief clerk to the Superintendent.

Q. For what period did you make the examination?

A. The period was March 9th and the 31st, 1909, and also April 5, 1909. I will state that when I made my request known I asked Mr. McCauley to produce these manifests, I told him I wasn't particular, any date would suit me, that I wasn't particular, I had no particular one to examine, and if

he would just bring out two or three that I would just sit down and make my record from it.

Q. Did you make any examination of other manifests than the ones which you abstracted?

A. Yes, I carefully examined through the month of March, 1909. I did not take any notes on that for the reason that I found the same condition existed all through the month as was shown in the statements which I prepared.

Q. You have here with you (to which attention will be afterward directed) the manifests of three trains, one upon March 9th, one upon March 31st, and one upon April 5, 1909, have you?

A. Yes, sir.

Q. State whether or not those were the manifests handed you by Mr. McCauley in response to your request.

A. Yes, sir.

Q. And state whether or not, in your judgment, the movement of those trains fairly represents the average movement upon trains of the character described in my former question.

A. Yes, sir.

Q. Now, please take the train for the 9th of March, 1909, and state what the number and name and time of that train was.

A. The train is known as 53-2, which left Staples at 5:35 in the evening of March 9, 1909. The manifests show that the train consisted at Staples of fifty-nine cars, which arrived at Dilworth on the 10th of March, at which point fifteen cars were taken off and one taken on; arrived at Jamestown on March 10th, at which point four cars were taken off and eight put on; the next point was Mandan, on March 10th, at which eight cars were taken off. The next point is Dickinson, on March 11th, which shows two taken off; the next point is Glendive, which shows one taken off and one taken on. The next point is Helena, March 13th; it shows two taken off. The

next point is Spokane, March 14th, which shows eight taken off and one taken on. The next point is Pasco, which shows seven taken off. This leaves, at Ellensburg, twenty-three cars, and at Tacoma and Seattle, twenty-one of the original fifty-nine cars which went through.

Q. These Coast trains are made up, you say, completely, at Staples?

A. At Staples.

Q. In Minnesota?

A. Yes, sir.

Q. And separate at Ellensburg, in the state of Washington?

A. They are separated there for Seattle and Tacoma.

Q. Separated for Seattle and Tacoma?

A. Yes, sir.

Q. Ellensburg, in the state of Washington, as you understand it, occupying practically the same position as Staples, in Minnesota, where the freight might diverge to St. Paul or Duluth?

A. Yes, sir.

Q. Now of the original fifty-nine cars which left Staples upon that train, how many reached Ellensburg?

A. Twenty-three.

Q. And of those how many went to Tacoma?

A. Six.

Q. And how many to Seattle?

A. Seventeen.

Q. And what was the entire number of cars in the train when it reached Ellensburg?

A. Twenty-three cars.

Q. Then none of the cars which were picked up by that train between Staples and Ellensburg went through to Ellensburg?

A. Some of them may, yes, sir.

Q. I thought you said, Mr. Yapp, that the train, when it reached Ellensburg consisted of twenty-three cars.

A. Yes, sir.

Mr. BUTLER: He said those were twenty-three of the original fifty-nine.

Q. How is that, we don't seem to understand you? I supposed from what you said that the train when it reached Ellensburg consisted only of twenty-three cars.

A. That is right, sir.

Q. And that all of those cars had left Staples upon the train.

A. No, sir, I didn't say that; not all of those cars. For instance, here is a car, 47207, which left Glyndon on March 11th, which was picked up which also arrived at Ellensburg.

Q. Now could you tell us how many of the fifty-nine cars which were in the train as originally constituted at Staples actually reached Ellensburg?

A. Twenty-one of those original cars reached Ellensburg, consigned to Tacoma and Seattle which originated at the starting point of Staples.

The MASTER: Twenty-three in all, and twenty-one of the original cars from Staples?

WITNESS: Yes, sir, that is correct.

Q. Now, please take the manifest for March 31, 1909, and give the history of that train in the same way, commencing with its number and date of departure.

A. Train No. 53-1, left Staples at 9:30 in the morning, March 31, 1909; the train left Staples on March 31st with fifty-six cars; at Dilworth sixteen cars were put off and five taken on; at Fargo two cars were taken off; Jamestown, five cars were taken off and one taken on; Mandan, three cars taken off; Glyndon, two cars taken on; Billings, one car taken on; Livingston, one car taken on; Lombard, one car taken on; Helena, seven cars taken off; Trout Creek, one car taken on;

Spokane, thirteen cars taken off, four cars taken on; Pasco, two cars taken off. This leaves forty-eight cars taken off in total, and sixteen cars taken on, or net cars taken off, thirty-two. The cars arriving at Ellensburg were twenty-four, and nineteen cars of the original train arrived at Tacoma and Seattle.

Q. Now, will you take the next manifest that you have with you, for April 5, 1909, and give the same information with reference to that.

A. Train No. 53-1 left Staples at half past 9 in the morning, April 5, 1909.

The MASTER: How many cars?

WITNESS: The train originating at Staples consisted of fifty-six cars. At Dilworth eighteen cars were taken off and four taken on; at Jamestown three taken off and three taken on; at Laurel, two taken on; at Helena, one taken off; at Missoula, one taken on; at Trout Creek, two taken off; at Spokane, sixteen taken off and fourteen taken on. At Pasco, three taken off. This makes a total of forty-nine taken off and twenty-four taken on, which leaves thirty-one cars arriving at Ellensburg and only eighteen of the original cars arriving at Tacoma and Seattle.

Q. At the time that you made this examination were you aware that it had been suggested that there were some trains originating in Minnesota that went through solid to the Pacific Coast?

A. I had heard that, yes, sir.

Q. State whether or not you were able to find any manifests in the Northern Pacific Railway offices showing any such train.

A. I was not able to find any in the examination that I made of this particular month's business, and I was informed by Mr. McCauley that the same condition practically existed

in other months, and I thought that was sufficient for the purposes.

By Mr. BUTLER:

Q. Mr. Yapp, in your testimony here have you disclosed all of the examinations that you did make?

A. Yes, sir.

Mr. BUTLER: I think we will have to reserve the right to cross-examine at a later time. The examination in chief has been directed to a subject that has not been heretofore called to my attention, and I think it would save time to take a little time to make inquiries as to facts that may or may not aid in cross-examination before undertaking it.

Mr. O'BRIEN: I haven't the slightest objection to that.

Mr. BUTLER: I will set on foot the inquiries as quickly as I can.

Adjourned until Friday, August 6, at 10 A. M.

FEDERAL BUILDING, St. Paul, Minn., Wednesday, Aug. 18, 1909, the hearing was resumed at 10 o'clock A. M., having been continued from August 6th.

DWIGHT C. MORGAN,

recalled on behalf of Defendants, testified:

By Mr. O'BRIEN:

Q. Mr. Morgan, have you prepared a statement explaining and analyzing Ex. 71-Cooper, introduced in connection with Mr. Cooper's testimony?

A. I have.

Q. Please produce it.

Witness produces statement entitled "Statement of lands purchased in the city of St. Paul by the Northern Pacific Railway Company, Mr. Cooper's Exhibit No. 71, showing purchase

price paid by Railway Company for such lands and Railway Company's and State's reproduction cost on such lands had they been included in the appraisal as of June 30, 1907," and same was marked "Defts' Ex. 3-R—Morgan," and offered in evidence.

Q. Have you prepared a similar statement with reference to Minneapolis in connection with Ex. 72—Cooper?

A. I have.

Witness produces statement entitled "Statement of lands purchased in the city of Minneapolis by the Northern Pacific Railway Company, Mr. Cooper's Ex. No. 72, showing purchase price paid by Railway Company for such lands and Railway Company's and State's reproduction cost on such lands had they been included in the appraisal of June 30, 1907," and said statement was marked "Defts' Ex. 3-S—Morgan" and offered in evidence.

Q. Will you in your own way explain Ex. 3-R and show what relation it has to Ex. 71—Cooper?

A. Ex. 3-R—Morgan is prepared for the purpose of showing that had we included in our appraisal all of the lands which are shown on Mr. Cooper's Ex. 71 we would, according to the sales-method, have arrived at a very different value than stated by Mr. Cooper in which his exhibit shows that the Company paid in St. Paul $433,310.61 and that the assessed valuation in 1906 was $120,342.22 and that the percentage of the assessed value to the purchase price was only 27.8 per cent. Now, I think in my direct testimony I made it perfectly clear that the value of all of the terminal properties was established by using contiguous property and that where railroad companies had purchased land we had taken the assessed value on that land for the express purpose of determining how much more the railroad company paid for that land than its normal value would be based on the assessments. In a proposition such as I had to deal with, it would be, I think, quite improper that I should

attempt to establish the relation between the true value of property and what it was sold for to any one particular railroad, because that would narrow the base and there would be individual conditions arising which would produce great inequalities. I might illustrate that in this way: take, for example, the purchase of Boom island, in Minneapolis, by the Wisconsin Central, the assessed value of that property and its true value is very much less than what the Wisconsin Central paid for the property—in fact they paid seven or eight times what the assessed or true value of the property would be based on the assessment. So that, in order to equalize these conditions, I made the base just as broad as I could by taking into account all of the properties which had been purchased by the railway companies in this city and in Minneapolis and in that way deriving the multiple that I used. Now, Mr. Cooper carried his process as far as determining the multiple but he did not apply it to the contiguous property for the purpose of getting the value. As I say I could not use what one individual road was able to do I think I was justified in taking the broader base and getting a more general concensus of the experiences of the different roads in purchasing terminal property. Certainly what one road might be able to do in certain parts of the city would not necessarily be a criterion as to other parts of the city. Therefore, taking it all, as a whole, we get a broader base and a more stable foundation upon which to work. Now, taking Mr. Cooper's Ex. 71, they purchased in the city of St. Paul 66.86 acres of land. That is shown at the bottom of column 2 of Ex. R—Morgan, for which they paid $433,310.61. Now, if the Northern Pacific had included that property in its appraisal at the same rate that they had included contiguous property now owned by them, the value of that property according to their base would be $1,468,781.03, that is, the market value. The State's market value on that same property,—using the multiple and measuring it by contiguous property

not owned by railroad companies,—we get a market value of $490,609.62. The "railroad value" which the Northern Pacific would get by using the same units of price which apply to contiguous property would be $1,897,918.61, and the "railroad value" of the State, using contiguous property and the multiple that we have established, we get a reproduction value of $858,566.68; so that it is to be observed that the market value of these lands is greater than the railroad company paid, and the "railroad value" is nearly double what they paid for these lands bought during the last five years.

Q. Let me see if I can understand this exhibit. In Exhibit 71—Cooper Mr. Cooper tested what you have described as the sales method by comparing the assessed value of certain lands actually purchased by the Northern Pacific Company with those particular lands only?

A. That is all.

Q. In using the sales method for the purpose of determining real estate you proceeded along the lines wihch you have already described in your testimony—

A. I did.

Q. —by taking in a great many more tracts of land than the tracts actually considered?

A. Yes.

Q. You have in Ex. 3-R—Morgan taken the lands referred to in Ex. 71—Cooper and have applied your method as described in your testimony to those lands?

A. I have.

Q. With the result that you arrived at a market value of lands of $490,609.62, whereas the lands actually cost, within the short period mentioned in Ex. 71—Cooper, $433,310.61?

A. Correct.

Q. In other words, you claim by this exhibit to show that if Mr. Cooper had correctly interpreted your testimony and applied your methods he would have arrived at a higher market

value for the lands than the company actually paid?

A. Yes.

Q. And the same is true with regard to what has been called railroad value?

A. Yes.

Q. Is the same condition shown in Ex. 3-S—Morgan with reference to the city or Minneapolis?

A. Yes.

Q. Can you briefly explain and call attention to those items?

A. Ex. 3-S is divided into two parts, because part of the property included in Mr. Cooper's Ex. 72 is contiguous to property already owned by the Northern Pacific Company, and part of it, shown in the lower columns of Ex. 3-S—Morgan, is not contiguous to property already owned by the Northern Pacific but is a new projected line through the city of Minneapolis upon which no figures were ascertained; therefore we included in this exhibit only that which was contiguous to the property already owned by the Northern Pacific company in Minneapolis. And it shows, briefly, that they purchased 21.77 acres of land for $102,016.55. If the Northern Pacific company applies to these properties the same values that they apply to the lands owned by them immediately adjacent, the market value would be $197,725.16, and the state's market value would be $92,146.81, measured from contiguous property. The railroad value, using the Northern Pacific lands adjacent as a base, would be $239,527.08, and the state's railroad value would be $148,299.40; so that in that case the market value of land shown ($92,146.81) is slightly less than the railroad company actually paid, the sum being $102,016.55, and the state's railroad value would be considerably in excess of what they paid, that amount being $148,299.40.

Q. Have you prepared a statement comparing the area and values of the railroad lands in the city of St. Paul and Minne-

apolis with the total area and values of all assessed lands in those cities?

A. I have.

Witness produces statement which was marked Deft's Ex. 3-T—Morgan and same is offered in evidence.

Q. The first half of this statement refers to the city of St. Paul and the second half to the city of Minneapolis?

A. It does.

Q. Will you please explain Ex. 3-T—Morgan.

A. Exhibit 3-T—Morgan, under the heading *"City of St. Paul,"* shows that within the corporate limits of the city there are 35,483 acres of land. Of this amount there is exempt from taxation water area amounting to 2,093 acres; railroad lands amounting to 1,917 acres; streets and alleys, 6,839 acres; parks, 1,569 acres; public schools, 66 acres; fire department houses and other city property, 30 acres; churches, hospitals and parochial schools, 124 acres; U. S. government and state property, 17 acres; cemeteries, 240 acres; making a total of 12,895 acres of exempt property and leaving a net acreage assessed in the city of St. Paul amounting to 22,588 acres. In 1906, the assessed value of the lands in the city of St. Paul was $48,569,242, which according to the ratio established by the state tax commission, is about 60 per cent of the true value of those lands, therefore, the true value amounts to $80,948,736. The improvements on those lands are assessed at $30,835,565—assessed at 50 per cent of their true value—giving $61,671,130 as the value of the improvements. The total assessed value of lands and improvements in St. Paul is $79,404,807, and the total true value of all assessed property in St. Paul is $142,619,866. Now, in the Minnesota railroad appraisal of June 30, 1907, the railroad companies centering in St. Paul owned, all-told, 1,917.1 acres. The market value of these lands has not been given by all of the companies, but the cost of reproduction of these lands is given at $39,039,360.88. The state's estimate of reproduction

shows the true value of these lands under Estimate B to be $13,241,734.66 and the railroad value, Estimate A, $23,071,155.13. The railroad companies own 8½ per cent of the assessed area in the city of St. Paul, on which they place a reproduction cost of $39,039,360.88, which reproduction cost is equivalent to 48.2 per cent of the true value of all of the 22,588 acres of land assessed in the city of St. Paul. The state's railroad value of railroad lands is 28.4 per cent of the true value of all assessed lands in the city of St. Paul.

Mr. DURMENT: That is Estimate A, isn't it, Mr. Morgan?

WITNESS: Yes. The state's true value of all railroad lands in the city of St. Paul is 16.3 per cent of the true value of all assessed lands in the city of St. Paul, which corresponds with Estimate B.

The MASTER: What is meant here by Estimate A and Estimate B?

Mr. O'BRIEN: Estimate B is Exhibit OO—Morgan, Estimate A is QQ—Morgan. Estimate B was the value of lands without the multiple and Estimate A was the value of the lands on the basis of reproduction cost including the multiple.

The MASTER: Then when you say Estimate A and Estimate B you refer to Exhibits OO—Morgan and QQ—Morgan?

WITNESS: Yes.

Q. From where did you take the figure $39,039,360.88 which you have given as the reproduction cost as claimed by the railroad companies?

A. Those figures were taken out of the special reports that were submitted to the Commission for the purpose of making up the valuation of all railroads in this state.

Mr. HOW: The special report made by the railroads?

WITNESS: Yes.

Q. You are now referring to the reports made to the Commission by the railroad companies at the time you entered

upon the work of valuing their holdings as described by you in your testimony?

A. That is correct.

The MASTER: And made in response to your call upon them for such estimates?

WITNESS: Yes.

Q. And the amount stated here is the aggregate of those values as claimed by all of the railroad companies?

A. It is.

Q. The net result of this statement is to show that the railroad companies hold the equivalent of 8½ per cent of the assessed lands in the city of St. Paul?

A. It is.

Q. And if the assessed value of the lands in the city of St. Paul which are assessed is taken to be 60 per cent of the true value, we would have for the true value of assessed lands in the city of St. Paul, $80,948,736, exclusive of improvements?

A. Correct.

Q. The value of the railroad lands as claimed by the railroad companies amounts to 48.2 per cent of this value?

A. Correct.

Q. You have already stated in your evidence, I believe, that the railroad lands in the city of St. Paul represent every class of property to be found in the city?

A. Yes.

Q. State whether or not in your judgment this 8½ per cent in area is so situated with reference to the other lands in the city that it is representative of all classes of land in the city.

A. Yes, it is.

Q. Should it or should it not, in your judgment, bear about the same percentage to the other lands in value which it does in area?

A. I have not made computation which would enable me to answer that question directly. I think that there are many

conditions which would have a bearing on that that would modify it one way or the other; I hardly think you could state that there would be a direct relationship, there would be inequalities, depending upon how the land is distributed throughout the city as to whether or not it would bear the same ratio.

Q. Have you made any other calculation with reference to the relation which the railroad land bears to assessed value in St. Paul or any portion of the city?

A. Well, as an illustration to show the extent of the value which has been placed on property owned by the railroad companies I have made some calculations with respect to the value of lands in the first, second and third tax districts in the city of St. Paul. Now the true value of all of the lands in the first, second and third tax districts in St. Paul is $30,757,225. These districts are bounded by Minnehaha street on the north, by Broadway and Mississippi streets on the east, by the Mississippi river on the south, and by Rice street on the west, comprising the entire business district of the city of St. Paul. The value of the lands within that area, as I have just stated, is $30,757,225, which is about nine million dollars less than the value of the lands in the city of St. Paul as returned by the railroad companies.

Q. The second half of Exhibit 3-T—Morgan gives the information with regard to the city of Minneapolis which is shown upon the first half of the table with regard to the city of St. Paul?

A. It does.

Q. And is prepared in the same way?

A. Yes.

Q. And your explanation of the St. Paul property applies to the Minneapolis property?

A. It does.

Q. Have you examined the construction records of the Northern Pacific Railway Company recently for the purpose

of ascertaining the propriety of certain unit prices for grading, track-laying and surfacing and ballasting as claimed by Mr. Darling in his testimony?

A. Yes, I have been engaged in making an analysis of construction records of the Northern Pacific. That investigation is not completed yet, but I have, however, secured some data that has a bearing particularly with respect to the lines in Minnesota.

Q. Will you please state what you have ascertained in that respect?

A. In respect to Mr. Darling's Ex. 81, which shows the cost of grading lines in Minnesota, work done by contract, and is for the purpose of showing the constant to be added to the contract price, I find from my analysis of the construction accounts, Bemidji to Black Duck (which is the first line) that under the head of Total Charges $282,264.47, a clerical error has been made to which Mr. Darling's attention has been called, amounting to $42,253.07. There is also charged to grading on this line $4,359.05 for putting the track in shape, and there is a charge of $943.45 for rental of equipment wherein the Company rents its own equipment to itself. Deducting these items from the total charges, the average cost per yard is 27.3 cents instead of 32.9 cents as shown on Mr. Darling's exhibit. Now under the second, Black Duck to Bemidji, under the column showing yardage, the construction accounts show 285,250 yards instead of 282,260 yards. That makes but a small difference in the final figures of just one word. It should be 377 instead of 477. Now in the lines from Wadena junction to Lake Park and from Lake Park to Glyndon the work done by the Northern Pacific company in those cases is reconstruction work and I hardly think that they furnish a fair index from which to establish a constant. Work of that character always involves extra charges that are in excess of those which would prevail ordinarily under free construction or without the interference

of traffic or the necessity of performing the work in such a way as to not interfere with it in any way. Under the Company work, shown below, I find that the accounts of the Northern Pacific are very much involved, it is very difficult to make an analysis of them, and up to this time I have not been able to satisfy myself in regard to that feature of the exhibit. I think that it would depend a good deal on judgment in dividing up the accounts as to just how it should be done; I hardly think that any two men would entirely agree in respect to that. Now Mr. Darling's Ex. 83 covers the cost of ballasting. I think in my direct testimony I referred quite fully to that part of Mr. Darling's exhibit headed Cost of Ballasting in Minnesota, where he shows 62.62 miles, that being the line between Staples and Fargo, and where the ballasting was done under the stress of heavy traffic—which I felt would not be a fair criterion to use as a base for estimating the cost of ballasting. In respect to the last item in that exhibit, Big Forks and International Falls, Mr. Darling's exhibit has there a constant of 3.6 cents per cubic yard for maintenance—which is an arbitrary charge—and the records of the company show that the cost of ballasting on this line was 44.49 cents per cubic yard, and to which must be added, for putting the ballast under the track, 18.38 cents, so that the total cost of the ballasting is 62.87 cents per cubic yard. The accounts of the Northern Pacific are carried in such a way that they have to be separated to show the different charges, and in these various charges I find that there is charged to this work the cost of a steam-shovel and no salvage on that steam-shovel has been allowed.

Q. That amounts to how much?

A. The salvage on the steam-shovel should be $5,500 according to the assistant chief engineer.

Q. What is the total cost of the steam-shovel which was charged in?

A. I have not the figures on the total cost of the steam-

shovel, but the salvage, the credit due from the use of that steam-shovel is $5,500, so that that amounts, in itself, to 3.93 cents per cubic yard on this line, reducing the cost to 58.94 cents per cubic yard. Then there is charged in, rental of equipment amounting to 10.63 cents per cubic yard. Deducting this item of rental of equipment we get a cost of 48.31 cents per cubic yard. Now in all of these exhibits the transportation of men and material is put in at full tariff rates, so that if these were brought down to a construction rate the cost of ballasting would be just about as I have estimated it, 45 cents per cubic yard. Now in Mr. Darling's Ex. 84, showing the cost of track-laying and surfacing on the System, he has one item showing Big Forks and International Falls 37 miles at an average cost of $860.46 per mile. According to the construction books the track-laying and surfacing on this line amounts to $1,556.14 a mile, from which must be deducted the ballasting, putting the ballast under the track which is charged up in their accounts to track-laying and surfacing and which has been taken out by Mr. Darling, amounting to $695.41, leaving the net of $860.73, which is the same as shown on Mr. Darling's exhibit. Now there is in that amount $979.70 charged to peeling ties, and that is a charge which properly belongs against ties, and it makes a reduction of $26.48 a mile. Then there is a rental of equipment amounting to $5,321.78, not including the repairs (the repairs are all provided for outside of that,) which amounts to $143.83 per mile, and then there are some minor errors in the distribution of the accounts which add $2.49 per mile, leaving a cost of $692.91 in which all of the materials, supplies, etc., have gone forward at full tariff rates.

Q. That last amount is larger than the amount which you have allowed for track-laying and surfacing, is it?

A. It is.

Q. The amount which you allowed for track-laying and surfacing was how much?

A. I think it amounts to about $520 on the Northern Pacific on an average.

Q. And this amount is how much?

A. $692.91. That difference comes about from using full transportation charges, and further than that, the cost of doing work in the construction of small branch lines is relatively greater. That would not be the case if you had a large proposition to deal with.

Q. Where is this line Big Forks and International Falls located?

A. It is in the northern part of the state. It is an extension of the Minnesota & International line.

Q. Requiring considerable of a haul for construction material and matters of that sort?

A. Yes.

Q. And, as I think you have already said, the conditions surrounding the building of a small piece of road of that sort would be very different from those where—

A. Yes, I think it is more costly to do small pieces of work than it is to deal with a larger proposition; you have to get substantially the same machinery there to do the small amount of work that you would have to use for a larger proposition.

Q. Your judgment is that, eliminating the items to which you have called attention, and further, bringing the item of transportation of men and materials to a cost basis, it would bring the cost of track-laying and surfacing to about what you have put it in your testimony?

A. Yes, I think so.

Q. Now go on.

A. I think there is only one other item I want to call attention to, and that was with respect to Mr. Darling's testimony covering the corduroy which was put in the line between Staples and Duluth. Mr. Darling testified that I had left that out of my exhibit. That amounted to 6,032,200 lineal feet of

corduroy, and Mr. Darling was mistaken about that, because it does show on the details in my office and has been included in my estimate, amounting to $241,288, and is included in my Exhibit OO or QQ under the head of Protection Work, Riprap and Retaining Walls.

Q. For some weeks past have you been superintending an examination of the construction books of the Northern Pacific Railway Company covering its entire system in the United States?

A. Yes, as far as their records were available for that purpose.

Q. You have had a large corps of assistants engaged in that work?

A. Yes, sir.

Q. From whom you have been receiving reports?

A. Yes.

Q. You of course know the relation which the value you have placed upon the Northern Pacific holdings in Minnesota bears to the values placed upon those same holdings in Exhibit 3—Darling, do you not?

A. Yes.

Q. Can you at this time state, generally, whether or not in your judgment the true value of the entire System in the United States would bear about the same relative proportion to the value of that System as given in Exhibit 2—Darling which the true value as ascertained by you and shown by Exhibit OO—Morgan bears to Exhibit 3—Darling, the latter being the valuations for the state of Minnesota?

A. The result of my investigations has not gone far enough for me to answer that except in a very general way, and on that basis I can say that were I to prepare a cost of reproducing the Northern Pacific System, I think about the same ratio would apply to the System as a whole as is shown with respect to my valuation for Minnesota as compared with theirs.

Q. Mr. Morgan, in view of all of the testimony which has been presented here in opposition to your statement as to values, unit prices, etc., and the further consideration which you have necessarily given to the question on that account and the recent examinations you have made, I desire to ask you now whether you desire to change your testimony in any respect or as to any items, except as you have already done so.

A. No. No, my entire effort has been to get at this as fairly as I could. I have not had any object to work to other than to try and reach the facts as far as my ability and research would enable me to do so, I have tried to make my testimony conform to that. I do not recall anything in my testimony that I care to change.

CROSS-EXAMINATION.

By Mr. HOW:

Q. My recollection is distinct, Mr. Morgan, that early in your testimony you announced your conviction that in undertaking the work of making this valuation, so-called, it would be necessary, on account of conflicting judgment, that appeared in the Steenerson case, for example, to obtain and follow some method that would enable you to eliminate judgment and get to rule in making a valuation?

A. Eliminate my personal judgment.

Q. That applies more particularly, of course, to the real estate valuations?

A. Yes.

Q. And I understood, although perhaps you did not state it at that time, that you had no qualification as a real estate expert which would justify, even in your own opinion, the putting of your judgment on values against those who had dealt in real estate in the various localities in which real estate which is to be valued lay?

A. I think I stated that I did not claim to be a real estate

expert, but that I had applied myself assiduously to a study of land values, not only in the cities but in the state at large, and undertaken to inform myself in respect to the buying and selling of lands as an aid to me in performing the work that I was engaged upon for the state.

Q. But that was merely incidental to and carried on collaterally with your other work in this business?

A. Yes.

Q. You did not have any qualification as a real estate expert or any experience which would justify you in applying your judgment to the problem prior to the time when you undertook this work?

A. No, I have not been engaged in the real estate business.

Q. Now in undertaking the work and in reaching your valuations, I think you testified positively in that, perhaps, that you did not at any time consider the utility of the land involved?

A. I think that that was qualified, Mr. How. I did consider the utility of the land, and let me illustrate that in this way: that the Northern Pacific owns submerged lands in Duluth, lands that are five or six feet under water. Now that land is not available for any purpose except railroad use unless it is filled up. Well, now, I made no distinction in respect to that land, I allowed just as much value for that land that was submerged as I did for that which was above the water, and therefore in that way I recognized the utility of that land for railroad purposes.

Q. Now just how far did you go in recognizing the utility of land or rather its capacity for utility? Just how far did you go? Did you in any case recognize the fact that any lands which you valued might or might not have greater capacity for utility and capacity for a higher purpose than contiguous, adjacent or neighboring lands?

A. I think I stated that my base has been that of contiguous lands.

Q. Will you kindly answer my question? I would like a categorical answer so far as you can give it.

A. I don't think I can answer that any plainer, Mr. How, than to state that I have used—

Q. Can you answer the question yes or no? If you can, I desire that you shall. If you say you can't, I am satisfied.

A. Well, I would be very glad to answer your question if I can understand it. I don't know that I understand your question entirely.

Last question read.

WITNESS: I can't answer that question categorically.

Q. You can't say whether you did or not?

A. I can answer it qualifiedly that—

Q. I don't want any qualified answers; I want categorical answers if you can give them, and then you can make your own explanations in your own way.

Mr. DURMENT: Well, he has said he can't answer in that way.

Q. You can't say whether or not you did do that categorically? That is what I ask now.

A. No.

Q. Now with respect to your Exhibits 3-R and 3-S (and I refer also to your Exhibit C-8 in the Great Northern case, which I did not understand when you offered it and do not yet understand) what tracts, if any, included in either one of those three exhibits have been included in Mr. Cooper's main exhibit in the case of the valuation of railway properties in the state of Minnesota?

A. Well, in Exhibit 3-R—Morgan the parcels marked A, B, C, and D are the only ones that were included in the appraisal.

Q. How about your Exhibit C-8? I refer now to the Northern Pacific property that you mention in that.

A. I think it is marked in the last column of the exhibit, that which has not been included in the appraisal, and covers the St. Anthony Park property and the Commercial street property.

Q. Is it not the fact that there is no property attributed to the Northern Pacific Company in your Exhibit C-8 an appraisal of which or a valuation of which has ever been offered by the company to you or in this case?

A. No, there is property in there—all that property transferred from the Northwestern Improvement Company, including Blocks 38, 39, 40 and 41 in Kittson's Addition—is included.

Q. And that property the actual cost of which to the Railway Company you compare with the Railway Company's cost of present acquisition was conveyed to the Company by the Northwestern Improvement Company, as you understand it?

A. Yes.

Q. And according to the testimony in this case and at the price for which it had been acquired by the Northwestern Improvement Company and at which it stood net upon its books?

A. Yes. The Northwestern Improvement Company and not what the Northern Pacific Company paid the Northwestern Improvement Company. In other words, the land cost the Northwestern Improvement Company $451,000; the Northwestern Improvement Company transferred it to the Northern Pacific Company for $300,000. Now the relation between the Northwestern Improvement Company and the Northern Pacific Railway Company was such that rather than take the sum named in the deed of transfer from the Northwestern Improvement Company to the Northern Pacific we took what the Northwestern Improvement Company actually paid for the property. There was probably some book-keeping account—which in fact I was unable to get any explanation of at the time, and have not as yet—so that we used what it cost the

Northwestern Improvement Company.

Q. Do you give the dates of its acquisition by the Northwestern Improvement Company?

A. I do not on that exhibit, no.

Q. Do you give the dates of acquisition by the former trustees who conveyed to the Northwestern Improvement Company when the Northwestern Improvement was formed?

A. No, it is not shown there.

Q. So that what you give there, then, as the actual cost to the Railway Company is the original cost to the Northwestern Improvement Company—ascertained how by you?

A. From their records.

Q. And the date of its acquisition or the date of its original acquisition in the interests of the Northern Pacific Railway Company does not appear and you are without it?

A. I have the data in my office.

Q. In your Exhibit 3-R, which is a list of the St. Paul properties with the acreage, the dates procured and the amount paid as compared with what purports to be the market value (that is, the value for other purposes than railway purposes if the value for railway use be eliminated,) and the railroad value put upon it by the Northern Pacific Company, and the same respective values put upon it by the state,—now let it be clear—I observe that you do not in that exhibit take these tracts separately but you lump most of them together; you pick out some particular tracts, but a large number of them you lump together for the purpose of making your calculation. I am correct in that, am I not?

A. Well, that was done—

Q. Well, I am correct in that, am I not?

A. Yes.

Q. That is what you have done. Now, in applying the Northern Pacific market value, if it is true that you had no estimate made by the Northern Pacific or by any witnesses in

its behalf, how did you arrive at your figures $1,109,603.88 in the second column of valuations in the first footing?

A. That figure is what the reproduction cost of those lands would be if measured by the price which the Northern Pacific had put on the lands which were immediately adjacent to it and owned now as a part of their right-of-way and terminals.

Q. Ah! That is to say, you used what you considered might have been the judgment of the real estate experts who appraised the property for the Northern Pacific and fixed these figures upon that basis?

A. I didn't use what might have been their judgment, I used the same figure that the Northern Pacific had put upon property which was immediately next to it.

Q. Without regard to the question as to whether the property was of the same kind, equally available or equally valuable for railway uses?

A. I took no consideration of any matters at all except to use what the Northern Pacific had used in adjacent property.

Q. So that this market value and railway value of the Northern Pacific as you attribute it to the Northern Pacific in this case, never was made by the Northern Pacific but is simply suggested by you as what the Northern Pacific would have made if it had made any?

A. Yes, that is right.

Q. And suggested by you upon the basis of what the Northern Pacific did make for its valuation with regard to other properties without regard to the fact as to whether or not there were any relations whatsoever between the relative values of these tracts and the other property?

A. That is correct.

Q. Is the same thing correct with regard to the exhibit concerning Minneapolis?

A. Yes. Those figures are not so important as the figures I get with respect to my cost of reproducing that property.

Q. Now let me look at that. What do you claim is shown by Exhibit 3-R and Exhibit 3-S?

A. I claim that, according to the records, the Northern Pacific paid $433,310.61 for the 66.86 acres that they bought. If they had used the same price that they had put against land immediately next to this, that those same figures would produce on this same land a market value of $1,468,000, and that by measuring it by the value of contiguous property I get a market value of $490,609.62, and that the railroad value on the same basis would be for the Northern Pacific estimate $1,897,918.61, and that for my railroad value it would be $858,566.68, for which they paid $433,310.61.

Q. Now let me see if I know what you mean by railroad value. I understand your railroad value to be your estimate of the price which a railway company would have to pay for the property involved for railway purposes?

A. Yes, if it had to acquire the property today.

Q. Yes, if it had to acquire the property today. Now, a comparision between your estimate of railroad value and the price actually paid by the Northern Pacific at these various times for this property shows that you are within a few thousand dollars for your estimate twice as much as the Northern Pacific actually paid?

A. Yes.

Q. And do you claim that that justifies you in declaring that your system or your rule of thumb by which you estimate value in this case is reliable and trustworthy?

A. I think that it shows that Mr. Cooper's testimony to the effect that I would not allow as much as the land actually cost the company is entirely disproved. Now I have not asserted, from the beginning, that the sales method is a perfect method, I believe it to be a reasonably reliable one, and there are inequalities—

Q. Are you depending upon this exhibit, among other

things, to prove that it is a fairly reliable system?

A. Yes, I am.

Q. Although your figures are twice what the Railroad Company actually paid for the property, according to this exhibit?

A. Yes; it shows that the estimate is necessarily very liberal that I have made.

Q. But you still think it is reliable?

A. Yes, as a whole.

Q. Now have you found any particular case, any particular example of any purchase of any property by the Northern Pacific Railway Company in which you can apply your system as an exact rule to determine what the value of the property was as finally settled between the Northern Pacific and the seller?

A. I should say that that would not apply to an individual case, Mr. How. I think that probably the inequalities in individual cases would not enable its absolute use, but it is where the base is broad and there is a large body of property to be considered that those inequalities disappear.

Q. I gather from your answer that it is an indirect way of telling me that you have not found any such example, and don't expect to. Am I right about that?

A. Oh, I think there are examples where it would apply.

Q. Have you found one? (No answer.)

Q. Do you think you can find them?

A. I have not attempted to treat it individually, it has been upon a broader ground than that.

Q. You haven't found one, have you?

A. Not exactly.

Q. Have you found any six or any twelve examples which taken together would make the sum total which the Northern Pacific Company paid for the property equal to the valuation which you put upon the total tracts by your rule of thumb?

A. I can't say as to that, Mr. How, I have not attempted to treat it in that way at all and I cannot say what the individual conditions would be; it has been a problem to treat on broader ground than that.

Q. You have investigated this subject very thoroughly; do you expect to be able to find any six or any twelve or any fifteen or any twenty or any thirty examples among several hundreds in which your rule would bring a valuation that agrees with the amount which the Northern Pacific Company actually had to pay for the property?

A. Not on the base upon which this work has been done. You understand that I am not considering the Northern Pacific property alone, nor am I considering that the Northern Pacific is a criterion which can be followed. We must take broader ground than that and consider all of the railroads, therefore it is not probable that so far as the Northern Pacific Company in itself is concerned it would fit.

Q. Did you make the valuation of the Northern Pacific Railway Company's real estate alone separated from other companies'?

A. Yes.

Q. Well, then, didn't you consider the respective particular tracts of the Northern Pacific Railway Company by themselves?

A. Yes, but I did not apply to those properties the ratios which the individual purchases of the Northern Pacific would produce, because the individual properties which the Northern Pacific had purchased would not give a broad enough base to treat the proposition as I believe it should be treated and give us the breadth to overcome inequalities one way or the other.

Q. Now, then, is this the final result, that taking all the tracts of the Northern Pacific which you valued, you think that the various inequalities of ratio of assessment to actual market value would balance each other so that your rule would

be a reliable rule applied to all the property throughout the city?

A. Yes, I believe that it would.

Q. But you don't think it would be reliable unless you took all the properties of the Northern Pacific?

A. No, I think that it is a problem that will have to be treated as a whole.

Q. If you take half of the properties of the Northern Pacific you don't think your rule would be reliable?

A. I couldn't say as to that; I have not attempted to do it.

Q. What is your judgment? You are the only person that has any judgment about this.

A. I haven't any judgment about it.

Q. You don't know what the result of the application of your rule would be if you took nine-tenths of the properties of the Northern Pacific?

A. No; I have only considered it as a whole, Mr. How, that is the only basis that I have gone upon.

Q. And in order that your rule shall be a reliable rule in your judgment, you think that all the properties of the North ern Pacific must be taken into consideration in determining the value of any tract?

A. Yes.

The MASTER: Then take a railroad that would have a very much less quantity of land than the Northern Pacific Railroad, your rule would not work as well, you couldn't get as near—

WITNESS: Well, I am answering the question in this way, that the base I get, the multiple that I use in ascertaining the value of the lands would be better ascertained by taking all of the lands that have been purchased by the railroad companies into account; and of course if a railroad company owns a very small tract of land I think the inequalities would be greater, would not be so conclusive as where you can reach out and take

a broad stretch of property extending through the city, it would not be quite so conclusive, although in those cases where property has been found beyond those limits we have attempted to treat them both by reason of the general sales and with respect to sales in that immediate vicinity to cover those conditions.

Q. Well, now, do you apply this rule in full to the properties of the Burlington road in the state?

A. Yes.

Q. Where does the Burlington line extend, between what points, within the state?

A. From the state line just below Hastings in to near the Union Depot.

Q. So that the extent of the area of the city of St. Paul which is covered by the Burlington is very restricted so far as its general locality is concerned, it does not run through the city but only touches one isolated portion of the city?

A. Yes, it touches the lower quarter of the city.

Q. But you thought the rule was equally applicable to the Burlington's property on that account as it was to the Northern Pacific's running clear through the city?

A. Yes, we applied it.

Q. And so with the Omaha?

A. Yes.

Q. And so with all the railroads?

A. Yes.

Q. Some of which touch only one side of the city, some of which go through it on one side, and some on another side?

A. Correct.

Q. But you would not consider that it was a reliable rule to apply to that portion of any railway company's property which lay in one particular locality of the city without reference to the rest of its property in other localities in the city?

That is, you would have to take each railway company's property as a whole?

A. I think that the property should be considered as a whole, as I have stated.

Q. Now I am not satisfied that I understand the full force and effect of Exhibit 3-T. I ask you if you will state, categorically, if you can, what you think is established by that exhibit; that is, what argument is to be based upon it or do you base upon it, what conclusion is established.

A. Well, the conclusion I reach by reason of this table is that the railroad companies own 8½ per cent of the assessed area in the city of St. Paul. Now then, that area is distributed all over this city—just as you have explained, some of it only touching the edge of the city, some of it another part of the city—so that it is distributed all over the city of St. Paul. Now that is 8½ per cent, the number of acres that the railroads own is 8½ per cent of the total assessed area in the city of St. Paul, and according to the value which the railroad companies have placed upon this property it is 48½ per cent of the true value of all the assessed lands in the city of St. Paul.

The MASTER: You speak of the true value of all the assessed lands?

WITNESS: Yes.

The MASTER: How acquired, how obtained?

WITNESS: That is upon the basis of the ratio which has been established by the state tax commission—60 per cent of the assessed value, or the assessed value is 60 per cent of the true value.

Q. But I did not understand you claim that there is any relation between the ratio of acreage of the railroad company with the total assessed acreage and the valuation claimed by the several railway companies in the aggregate and the true value as you establish it upon the basis of the assessed value of other properties?

A. Well, there is necessarily a relation, Mr. How, which can only be ascertained or determined in a general way upon a broad view, that there is necessarily a relation existing between the value of property in one part of the city and of the city as a whole scattered over the city.

Q. Well, what is the relation?

A. I can't say beyond the fact that according to the true value of the lands as returned by me we get 16.3 per cent of the true value of all of the assessed lands, so that the true value allowed the railroad companies is proportionately greater than the amount that they own.

Q. But the valuation that you get the ratio is twice as great as the acreage ratio?

A. Yes, it is.

Q. Do you now declare it to be the rule that it should be? Is there anything in this exhibit that justifies your valuation?

A. I cannot declare it to be the rule, Mr. How, but I do declare it to show that, according to my judgment, the value returned on the properties owned by the railroad companies is too high.

Q. Now you are bringing in your judgment?

A. Yes.

Q. And this is merely a matter of judgment?

A. Yes.

Q. Well, now, Mr. Morgan, I suppose that you and I can find in the city of St. Paul one acre of land which shall be 1/22000ths, in round numbers, of the entire acreage assessed in the city of St. Paul—

A. Yes.

Q. —the market value of which would doubtless be, to put it very moderately, $500,000, probably twice that amount; would you consider that anybody who claimed that it was worth $500,000 could be successfully refuted by a reference to

the ratio which that $500,000 bears to $3,000 an acre over the county?

A. No.

Q. You would not consider it had anything to do with it?

A. That is an entirely different proposition, Mr. How.

Q. You would not consider it had anything to do with it?

A. There would be a relation there, necessarily, between the value of one piece of property and another.

Q. What I want to get at is a rule by which the relation may be established and may be gathered in any case.

A. No, I don't think there is any rule.

Q. But you think that in St. Paul, because your relation is 16.3 per cent for the value of railway lands as compared with the value of all other assessed lands, whereas all the railways taken together show a relation of 48.2 per cent, that that justifies your system, do you?

A. I am not trying to justify my system in this, I am just simply showing the disparity which exists.

Q. Do you think that it proves that your valuation is an accurate and proper one?

A. To my mind it satisfies me that my valuation is high enough; and that is based upon a comprehensive view of the entire situation, and a study of the entire conditions in these cities for a number of years.

Q. In Darling's Exhibit 82 you say that the construction records of the Northern Pacific show a charge against construction for rental of equipment.

A. Yes.

Q. Do they show any charge for depreciation of equipment?

A. No, not a separate charge for depreciation of equipment.

Q. Is it not a fact, as you understand it, that their charge for rental of equipment is merely a charge for depreciation under another name?

A. I couldn't say as to that.

Q. But they don't make any for depreciation of equipment?

A. I found none.

Q. Did you include a charge in your estimate, your details, for depreciation of equipment?

A. Not under the head of grading. That is contract work.

Q. Did you include it under anything?

A. Yes, I did.

Q. Under what?

A. Under Track-laying and Surfacing and under Ballasting.

Q. Let me go on, then, to ballasting. You criticise and subtract from the Northern Pacific estimate, or rather its detailed record of the cost of ballasting, the rental of equipment. Did you put in a charge for depreciation of equipment in place of it?

A. I did not, because it did not show in their accounts.

Q. Well, you know it has been testified in this case, don't you, that rental of equipment is just simply depreciation of equipment under another name?

A. I couldn't say. I don't see how it could be included in that sense exactly.

Q. You don't think it is fair, do you, to withdraw the item of rental of equipment and not put in any estimate of depreciation of equipment?

A. Well, I think an allowance should be made for it, yes.

Q. Well, you have done that, haven't you?

A. I have taken this from the construction accounts, Mr. How.

Q. You have done the same thing with track-laying and surfacing, haven't you?

A. Yes.

Q. You haven't put in, in either case, the item of depreciation of equipment in its place?

A. No; that was an analysis of the construction accounts and I had no right to enter items in construction accounts that do not appear there.

Q. You had a right to change the heading of it, didn't you, if you knew it meant the same thing?

A. Well, I didn't want to do that. I don't think it does mean the same thing. I don't think that a charge of $25 or $35 a day or 75 cents a day for cars and $12 and $15 a day for the use of an engine is for depreciation, I don't thnk it could possibly amount to any such sum.

Q. Now you say the work between Lake Park and Glyndon and Wadena and Lake Park was reconstruction work; what do you mean by that? It is a new line, isn't it?

A. Well, it is not a new line, Mr. How. They are practically building a new railroad but it is along the old line, much of it.

Q. They are building it on a new right-of-way

A. Some of it.

Q. Nearly all of it. It is in testimony in this case that they had to pay for the right-of-way.

A. Yes, some of the right-of-way they had to purchase; a great deal of that work across through there, though, is on the existing right of way of the Northern Pacific, and on some of it they have changed the line.

Q. They have not had to suspend traffic in order to build this new line?

A. Well, they have interfered with traffic very seriously.

Q. What extra charges do you find in their construction records which are attributable to interference with traffic?

A. I have not analyzed those accounts at all.

Q. Those are all charged to operating expenses, aren't they?

A. I couldn't say.

Q. Delay of trains, etc?

A. I couldn't say as to that.

Q. Now is it your judgment, finally, Mr. Morgan, that that work should be considered as reconstruction rather than original construction; is that your final judgment?

A. I am not passing judgment with respect to how that should be charged, I am merely stating that I did not think I could make an analysis of it because of the complicated conditions there—the charges to construction, the charges to operation and various things of that kind—which run up extra charges, and I didn't think, and don't think, that it represents and is a fair criterion to take as a base for getting a constant.

Q. I want you, if you will, to tell me what charges you found in there that were not fair.

A. I said that I had not analyzed those accounts. I know from my own experiences in construction work of that character that there are many things that creep in, and therefore that if we are going to prepare an exhibit for the purpose of showing the constant let us take examples where there are not unusual complications.

Q. Mr. Darling took all the examples he had in the road for the purpose of his illustration, didn't he?

A. I think probably he did.

Q. Now will you not state, in the first place, what things creep into such a construction question that you think are not justified or would not come in?

A. Well, oftentimes in construction work of that kind the interference with traffic, the care with which it is necessary to do work is an element; oftentimes work is partially done and for certain reasons it is left in that condition only to come back to it later to finish it, so that in that way the work cannot progress in the usual and customary way.

Q. Well, now, it would be very easy for you, Mr. Morgan, to justify your views in that by picking out some such charge in these construction accounts, wouldn't it, if any exist?

A. If it were possible to analyze the Northern Pacific accounts, yes. I have not satisfied myself yet with respect to those charges. Now with respect to the accounts on those lines, we are still investigating them and still working at them and therefore I am not prepared to say whether or not it can be analyzed intelligently.

Q. You know, don't you, that with regard to the question as to whether or not this is reconstruction or original construction work the probability is that the old line—perhaps it has not been abandoned but will be if it has not been—the line simply is a new line?

A. Yes, it would be a new line, certainly.

Q. And the old line on it has been abandoned?

A. Yes, I think parts of the old line have been abandoned.

Q. Well, it all has been in the used part of it?

A. Well, it would be the part only where they depart from the original right-of-way. It would not be necessary to abandon the old line where the reconstruction work was being done in common with the existing line.

Q. Now, when you testified that in your judgment as far as you have been, without intending that that shall be an accurate judgment, if I construe your testimony properly, the same ratio should be established between your valuation of the system and Mr. Darling's valuation of the system as offered in evidence in this case as has been established in your valuation of the system in the state as compared with his, you include, of course, real estate in that statement?

A. Yes.

Q. The present cost of acquisition of the real estate is a very important, one of the most important, elements in the entire valuation of the System?

A. Yes.

Q. Did you apply your rule to the real estate of the company on the system outside?

A. I did not. My observations were very general.

Q. What basis did you take for your judgment—that the same ratio would be observed in the system as in the state in real estate?

A. That was only a very general observation that I am able to give in respect to that at this time.

Q. Will you give some reason for having the opinion?

A. There are certain items connected with the valuation of the system that are arbitrary, such as contingencies, interest and matters of that kind, that I would reduce in any estimate that I would prepare. There are units of cost that I would reduce. So that, considering that those estimates were prepared at the same time, by the same people and in the same way generally as for Minnesota, my estimate I think would be correspondingly less than that turned in by the Northern Pacific.

Q. Well, as far as the real estate is concerned they were not wholly prepared by the same people. You recollect, do you not, that the Northern Pacific Company employed experts in Duluth, experts in Minneapolis, experts in St. Paul and experts in the western prominent terminals, where they have the highest value real estate, and accepted their judgment and advice in making the final estimates of cost of present acquisition of the real estate?

A. I was speaking more particularly with respect to the officers of the road who had in charge the preparation of the estimates.

Q. And you think that if Mr. Cooper's estimate of the value of real estate in St. Paul (that is, the present cost of acquisition of real estate in St. Paul) is twice as high as yours is, based upon your rule for establishing the value that naturally—so naturally that you are willing to offer it as your judgment under oath and state that you have an opinion on it—it would follow that his estimate of the value of terminal properties at Tacoma, Seattle and other important terminals would be twice as

high as that which you would finally determine, whether upon your rule of thumb as applied in these localities or upon any other basis would be the proper valuation from the state's standpoint?

A. I have not attempted to analyze Mr. Cooper's valuations in detail other than to form a general opinion—not particularly with reference to Mr. Cooper but with respect to the entire valuation—in a most general way.

Q. In making that entire valuation of construction work, etc., have you been over the system, did you pass over a good part of the Northern Pacific system, with this purpose in mind?

A. No.

Q. Simply casually?

A. No, for other purposes, for investors.

Q. And you have made no detailed estimate with regard to the cost of construction in any particular locality, have you?

A. No, I have not.

Q. So that your estimate upon those questions is a mere general opinion?

A. Just a general opinion with respect to it.

Q. Without any examination at all for the purpose of making the opinion?

A. Well, of course I have had the examination of the construction accounts in view.

Q. Yes, so far as they go.

A. As far as they go; and all of the data which has been prepared, the units of cost and all that.

Q. And they are very insufficient, are they not, for making a final estimate of the present cost of construction of the Northern Pacific road?

A. Well, I don't expect to find them so, Mr. How, when I get through with my investigation.

Q. Well, they have been found so so far, have they not?

A. I said that they were not completed up to this time in such a way—

Q. Well, with regard to most of their branch lines they haven't any records, have they, of original construction?

A. That is true with respect to some of the branch lines.

Q. Most of the branch lines,—that is my question.

A. I can't say at this time; I haven't that data tabulated; I don't recall.

Q. You don't know?

A. I don't know.

Q. Well, then, Mr. Morgan, after all, your opinion that the same ratio will apply as between you and Mr. Darling, your estimate of the present cost of acquisition and construction of the system, is not an opinion at all; you would not be willing to declare that you know enough about it to have an opinion?

A. Only in the most general way can I make that statement, and I so qualified it.

Q. But you would not state here, under examination as a witness, and declare that you had an opinion, would you, on the question?

A. I would declare that I have a judgment in a general way, just as I have qualified it.

Q. But it is a judgment that you would admit had no information in particular to rest upon?

A. Well, I think I have information in particular to rest upon with respect to the prices of various things.

Q. But that is all, isn't it? (No answer.)

Q. I am trying to find out myself what information you have. You don't know what records are extant and what are not, what information you can get with regard to most of these branch lines? Am I not right about that? You say you don't know whether most of them have records or not?

A. I say I have not made full investigation and therefore could make the statement only in a general way at this time.

Mr. O'BRIEN: This completes Mr. Morgan's testimony in the Northern Pacific case, and we would like to suspend the Northern Pacific case now and take up the Great Northern case and offer Mr. Morgan for cross-examination in the Great Northern case.

Mr. HOW: All I can say is, what I have said before, that I am not prepared to cross-examine Mr. Morgan.

The MASTER: In the Great Northern case?

Mr. HOW: In the Great Northern case. I do not think that it is desired to cross-examine him, but I am not justified in saying that. I have associates, but Mr. Leech, who was here representing Mr. Hoagland's office, agrees with me that that is the understanding.

The MASTER: That a cross-examination is not desired?

Mr. HOW: In the Great Northern case.

Mr. O'BRIEN: Mr. Morgan is about to remove to Pennsylvania with his family and desires to start tonight. With the statement made, we will feel justified in permitting him to go.

Mr. HOW: I think you are.

Mr. O'BRIEN: Now, so far as I know, Mr. How, this completes the testimony in the Northern Pacific case.

Mr. DURMENT: Well, there is a foreclosure matter to be checked up.

Mr. HOW: I put that proposed stipulation you wanted us to make, Mr. Durment, into the hands of Mr. Bunn, in order that I might be saved the toil of ascertaining whether the facts are accurately stated. He thinks that perhaps they are not as clearly stated as he can state them, and I will say that I shall be willing to make a proper stipulation, for what it is worth.

Mr. O'BRIEN: I desire to say that I am at present engaged in preparing a brief in the Northern Pacific case, which I am very desirous of presenting to the Master and the counsel before the first day of September, and I would like to close the

Northern Pacific case at as early a day as possible so that it may complete that work.

Mr. How: I do not now know of any more testimony that we want to introduce in the Northern Pacific case, and I don't think that there will be any. The Master appreciates that in a case of this importance, I may, in going over the testimony, find some hole that ought to be filled; I do not expect, however, to do so, I don't know of any, and so far as I know, the testimony in the Northern Pacific case is through unless we have made some omission.

Mr. O'Brien: The only thing I want to be assured is that after I expose the weakness of my opponents' case in my brief they won't then undertake to try it over again.

Mr. How: Well, is it an inherent weakness, or does it rest in omissions?

Mr. O'Brien: Courtesy will compel me to say yes, that it is inherent. (Laughter.)

The Master: Will there be an intervening adjournment?

Mr. O'Brien: No, sir; let us adjourn until Monday morning. I think that we shall be ready with Mr. Hillyer on Monday morning and that we shall finish finally with him at that time.

Mr. How: Monday morning is all right.

Mr. O'Brien: We had better adjourn tentatively until Monday morning, at any rate.

An adjournment was then taken until Monday morning, August 23; subsequently the hearing was continued until Thursday morning, August 26, 1909.

FEDERAL BUILDING, St. Paul, Minn., Friday, September 24, 1909, the hearing was resumed at 10 o'clock A. M.

WILLIAM G. JOHNSON,
recalled on behalf of Complainant, testified:

By Mr. BUTLER:

Mr. BUTLER: Mr. Johnson's testimony will be, in substance, generally applicable to all of the cases in which testimony has been taken so far, and will be very short, I think.

Q. Mr. Johnson, have you with you typical forms of way-bills in common use on the Northern Pacific during the months referred to in the testimony of Mr. Hillman, upon which he based certain computations in the exhibits prepared by him?

A. I have here examples of four way-bills made at Minnesota Transfer in the month of April, 1906, two of which cover freight destined to Glenwood, Minnesota, one covering a shipment to Royalton, Minnesota, and the fourth covering a shipment to Philbrook, Minnesota, all originating at Minnesota Transfer; that is to say, way-bills made at Minnesota Transfer.

The four way-bills were marked as "Complainant's Ex. 90—Johnson."

Q. These way-bills, four in number, are copies of way-bills actually used and upon which freight actually moved at about the dates specified in the way-bills?

A. Yes, sir.

Q. And all were made at Minnesota Transfer and cover shipments moving on the Northern Pacific from that point?

A. Yes, sir, wholly within the state.

Q. Do they all cover intrastate business?

A. No, sir.

Q. How many do and how many do not?

A. The two way-bills to Glenwood, Minnesota, being Nos. 4497 and 4460, cover interstate shipments because the shipments originated at St. Louis and Chicago.

Q. And the others?

A. The shipment on way-bill 4350 originated at Red Wing, Minnesota, and the shipment on way-bill 4393 originated at St. Peter, Minnesota, making those two shipments intrastate shipments.

Q. Are these the forms of way-bills that were in common use by the Northern Pacific Railway Company during the period of years under consideration in this case?

A. Yes, sir, these are known as the standard way-bill, commonly used by all railway companies.

Mr. BUTLER: The exhibit is offered in evidence, (Complainant's Ex. 90—Johnson.)

Q. Some reference was made and has been made from time to time during these cases to the papers known as station agents' abstracts. Have you with you any copies of any particular station agent's abstract that we may offer it in evidence for the purpose of illustrating the form?

A. Yes, sir, I have here three sheets of "forwarded" abstracts, made at Minnesota Transfer in the month of April, 1906, covering shipments to points in the state of Minnesota.

Marked for identification "Complainant's Ex. 91—Johnson."

Q. Of what date?

A. During the month of April, 1906.

Q. Ex. 91 is shown witness. Will you explain to the Master what Ex. 91 is?

A. Ex. 91 is an illustration of what is known as the freight forwarded abstract. This form is made by each station on the road, showing all shipments forwarded to all other stations on the road, monthly. It shows the way-bill number, the weight, the freight charges, advance charges and prepaid charges; and only in the case of carload commodities does it show what that commodity is. It does not show the true point of origin of the shipments.

Q. So that from these agents' abstracts at junction-points

it cannot be ascertained what the freight is except when it moves in carload lots?

A. If you refer to the commodity, no.

Q. Yes, that is what I mean; and as to its character as to its being interstate freight or intrastate freight?

A. No, sir, it cannot be determined from the abstract.

Mr. BUTLER: Ex. 91 is offered in evidence.

Q. During the taking of the testimony in this case, and especially during the examination of Mr. Hillman in the Northern Pacific case, reference was made to certain train-sheets from which he made certain computations. I recall some such computations were made on Table No. 6, Subdivision A of that table. Have you with you any specimens of train-sheets that were in use at that period?

A. Yes, sir, I have here a sample of the form used, being Northern Pacific No. 1458.

Witness produces statement and same was marked "Complainant's Ex. 92—Johnson."

Q. Ex. 92 is called to your attention; is that one of the train-sheets of the Northern Pacific, a copy of the original train-sheet, showing the transactions of the date referred to at the caption, October 14, 1907?

A. Yes, sir; these were furnished me as being true copies of the original documents.

Q. The original document itself is kept in another department of your Company?

A. Yes, sir; it is kept in the office of the Superintendent of Transportation.

Q. And you simply called for these copies and were furnished them?

A. Yes, sir.

Q. And are familiar with the form and can tell us whether this form of train-sheet is the form that has been in common use during recent years on the Northern Pacific?

A. Yes, sir, it is the form that has been used for a number of years past, as far as I know.

Q. Does it cover the entire road, or only a part of it, this particular sheet?

A. The sheets submitted cover the east-bound and west-bound trains on the third district of the Lake Superior division, that district being part of the road between the Head of the Lakes and St. Paul, what was formerly the old St. Paul & Duluth Railroad.

Q. This form, then, shows precisely the transactions which are purported to be shown, and illustrates the form and information that such sheets show generally?

A. Yes, sir.

Mr. BUTLER: Ex. 92 is offered in evidence.

Q. I intended to ask you with respect to Ex. 91, which is the form of agents' abstracts, whether that exhibit is a copy of the abstract of April, 1906, of which it purports to be a copy.

A. Yes, sir.

Q. It shows the actual transactions?

A. It shows actual transactions, and they are copies of original documents.

Q. And are these forms in this Ex. 91 the same as have been in use generally on the Northern Pacific during recent years?

A. Yes, sir.

Q. And do you know whether or not they are standard forms of such abstracts as were the way-bills?

A. They are what are known as the standards of the Association of American Railway Accounting Officers.

Q. And are quite generally, then, employed on all of the railroads?

A. Yes, sir.

Q. I want to refer to a subject that has had considerable

attention paid to it during the taking of testimony here, and that is the method of distributing operating expenses in any state between the freight and passenger business, and ask you whether or not the method followed by your Company, and the others which have been shown to follow it, is, in your opinion, a practicable and just method of making such distribution, and ask you to give your reasons for so saying, if you do say so.

A. I believe the plan followed by the Northern Pacific produces results that are approximately correct, and I will enlarge upon that subject, by stating as follows. As to the division of operating expenses or the assignment of operating expenses to freight and passenger service, of the total operating expenses a large percentage is definitely determinable as being common to freight and passenger business, but practically all operating expenses are common to both classes of service; take, for example, the items of expense in connection with the operations of trains; at first glance, it might appear that this expense is entirely chargeable to freight service when it covers the operation of a freight train, but it is a fact that of the total ton mileage of the Northern Pacific about eighteen or twenty per cent is company material, such as fuel, ties and other material used in connection with maintenance of way and structures. It is the common practice of the Northern Pacific (and I believe it is common on all other roads that divide operating expenses between passenger and freight) to assign the expense of operating a freight train to freight expenses, but the railroads do not keep track of the cost and division of the expense involved in hauling that company material for the use of the operating department; consequently the expense remains as a freight expense, whereas a part of the material, at least, may be used or be assignable to passenger service. *Vice versa*, passenger trains carry employes of the operating department, and the remarks made

in connection with the expense of running freight trains are applicable to the cost of running passenger trains, because no charge is made for carrying those passengers. These two illustrations apply to other items of expense that are usually considered as being wholly chargeable to either class of service.

The most important item of common expense is the physical maintenance of the roadbed, track and structures, and it may be held that the revenue-train mileage basis either undercharges or overcharges one class of service, but there are so many factors affecting the accurateness of the division of this class of expenditure (and one of these factors of importance that has not been already mentioned in this case is that the cost of transporting the immense amount of material required for this branch of the service is by the method of accounting followed by all important railroad systems charged to the freight service) that the best thought on railroad practice has never been able to find a basis that is more practicable and uniform than revenue-train mileage. The earliest record of the use of this factor, as far as my knowledge goes, is shown in a pamphlet issued in 1875 by Albert Fink, vice-president and general superintendent of the Louisville, Nashville & Great Southern Railroad, and the use of that factor has increased so that to-day we have definite knowledge of its use by the following important railway systems of the United States:

		Mileage
Santa Fe,	System	9,350
Rock Island,	"	7,938
Burlington,	"	8,875
Pennsylvania,	"	11,080
Erie Railroad,	"	2,333
Louisville & Nashville,	"	6,891
Union and So. Pacific,	"	15,376
Great Northern,	"	6,499
Total,		68,342
Northern Pacific,	"	6,285
Total mileage,		74,627

which is about one-third of the entire railroad mileage in the United States.

As the result of much inquiry I am not aware that any railroad making division between freight and passenger uses any other basis than the revenue-train mile.

The MASTER: Not including switching?

WITNESS: Not including switching. The purpose and only purpose of expenditures upon road, structures, equipment and operation is to run freight- and passenger-revenue trains. Hence the revenue-train mile must, of necessity, afford the best and truest basis of division, all things considered, the fluctuating conditions and the operation of a road.

Q. I think it has already appeared in this case that the Northern Pacific Company, and, indeed, that no railroad company, undertakes, as a matter of accounting, to set up in its books of account any division of operating expenses between state and interstate business, either in the freight or passenger business?

A. No, sir.

Q. That is true of the Northern Pacific?

A. That is true with the Northern Pacific; and as to that factor or division I may say, as has been previously stated, any division between freight and passenger cost can only be an approximation. Assuming that it were possible to determine with accuracy the items heretofore mentioned by me, we then face other conditions affecting the cost of state and interstate business, among which the more important as regards freight business are; relation of the various classes to the total freight carried; the average carload; inequalities in the direction of traffic; the average haul.

It cannot be questioned that it costs more per ton to transport dry-goods than it does coal, because the handling of dry-goods involves an expenditure for trucking, etc., at stations that is not required in transportation of coal, and the same weight per car cannot be handled.

In view of the fact that state and interstate traffic are carried in the same cars and in the same trains, it is hard to say which class of traffic shall be charged with the additional expense incurred when the traffic in one direction is not as great as the traffic in the other direction. In the same train, the cost of hauling the loading of different cars greatly varies. The cost of haul, so far as it depends on weight, is governed by the entire weight moved—that of car as well as of loading. Accordingly, eight tons in a car costs twice as much for haul as twenty tons in a car of light weight. In the former case, assuming weight of car to be 17 tons, total weight is 25 tons, or a little over three tons weight must be moved for each ton of loading or paying freight. In the latter case the total weight moved would be 37 tons only, or slightly over one and one-half tons per ton paying freight or live load, as it is generally designated in freight operation.

Q. Now, as respects the equipment of the Northern Pacific Company, it has various kinds of cars, I take it, box and flat

and coal and stock, and furniture, and refrigerator, ballast, oil, has it not?

A. Yes, sir.

Q. Now is there kept by that company and by railway companies generally equipment lists which show the kinds of cars owned by the company and the character of the same?

A. Yes, sir.

Q. These are kept regularly and exchanged between railway companies?

A. I don't know that they are exchanged between companies, that is, that the data is exchanged between companies, but it is the common custom of railroads to keep such information.

Q. And your company has kept it?

A. Yes, sir.

Q. Have you drawn off a statement showing the number of cars of each class and the capacity in tons and the average light-weight of cars of each class?

A. Yes, sir.

Q. Those in effect June 30, 1908?

A. Yes, sir, as of June 30, 1908.

Q. And is the mileage in the State of Minnesota, of cars of these various classes regularly kept by accounting officers of the company?

A. Yes, sir, that is standard information.

Q. And have you prepared a statement from your books of that information also for the same period, June 30, 1908?

A. I procured such information from our superintendent of transportation.

Q. And do you also keep a record of the travel of these cars by classes, both loaded, empty, and the total?

A. Yes, sir.

Q. And have you made a statement showing that for April, 1908, and October, 1908?

A. Yes, sir, I procured such information from the superintendent of transportation.

Q. Calling your attention to Ex. 93, the first sheet of it, as I understand it, is a statement showing first, the class of cars, the number in each class, and the capacity in tons, and the average light-weight?

A. Yes, sir; also the number of cars of each capacity.

Q. Yes, sir, that is what I was trying to say. For example, of box-cars, the Company had two cars of capacity of twelve tons each; the light weight of those two is not given?

A. No, sir.

The MASTER: What do you mean by light-weight?

Mr. BUTLER: Empty.

The MASTER: The car itself.

Mr. BUTLER: Yes.

Q. Light-weight means the car?

A. What is commonly known as the tare weight.

The MASTER: That is, it is the weight of the unloaded car?

WITNESS: Yes, sir, the weight of the car itself.

Q. It also shows that the Company had 1839 cars of capacity of 20 tons each?

A. Yes, sir.

Q. And the light-weight of each car was 25,850 pounds?

A. Yes, sir; that is the average light-weight of that group of cars.

Q. And then it shows the number of cars it had of the capacity of 25 tons, of 30 tons, of 35 tons and of 40 tons?

A. Yes, sir, with the average light-weight of each.

Q. And similar information as respects flat-cars?

A. Yes, sir.

Q. And coal cars and stock cars, and furniture and refrigerator and ballast cars, and oil cars?

A. Yes, sir.

Q. Now, the second sheet of that exhibit, as I understand

it, shows the freight-car mileage in this state, for the year ending June 30, 1908?

A. Yes, sir.

Q. And shows the loaded travel of each class, the empty travel of each class, and the total?

A. Yes, sir.

Q. The second or lower part of this same sheet shows the average mile per car per day by classes, in the month of April, 1908, and of October, 1908?

A. Yes, sir, subdivided into loaded, empty, and the total.

Q. As to each class, box, refrigerator, stock, flat, Rodger & Hopper, gondola, maintenance of way, caboose and foreign?

A. Yes, sir.

Q. Now, the foreign cars included on this statement, on the second sheet of the exhibit, is not subdivided into classes?

A. No, sir, because we haven't the information available.

Q. But does embrace all of the classes of foreign cars that come upon your line?

A. Yes, sir.

Mr. BUTLER: Ex. 93 is offered in evidence.

Q. Mr. Johnson, does freight move in equal volume over the lines of the Northern Pacific Company in both directions?

A. No, sir; taking a year through on the Minnesota lines of the Northern Pacific, there is considerably more east-bound than west-bound. This relation of the movement, however, is not constant in either direction. At some times of the year the west-bound will be a good deal larger than the east-bound; at others the contrary will be the case. Taking the year through, as I said before, there is considerably more east-bound, about one-fourth more.

The MASTER: That is, the volume of business going East is 25 per cent more than that going West?

WITNESS: Yes, sir, it is, the average for the year.

The MASTER: I mean for the year.

WITNESS: Yes, sir.

Q. And has that been so for the last three years?

A. Practically so for the past three years which I have examined, yes, sir.

Q. But at times in each year, as I understand it, the weight of the traffic may happen to be flowing West?

A. Yes, sir.

Q. Now, have you made any examination for such movement in Minnesota for the year ending June 30, 1909?

A. Yes, sir, I did.

Q. As between all tons moved in Minnesota and the intrastate ton miles in Minnesota, and the percentage?

A. Yes, sir.

Q. Will you give us the exact figures of all ton mileage?

A. Expressed in percentage?

Q. No, I wanted all ton mileage.

A. All ton mileage in the state of Minnesota, for the year ending June 30, 1909, was 1,121,821,283 miles, of which there was east-bound 611,159,122 ton miles, or about 55½ per cent of all ton mileage. Therefore the east-bound ton mileage is about one-fourth greater than the west-bound ton mileage.

Q. Now, what proportion of the ton mileage was intrastate business? By the way, in the year 1909, you have kept accurately the true intrastate business?

A. Yes, sir.

Q. And it does not include the error which has been so often referred to here in the statistics of prior years?

A. No, sir.

Q. Now, can you give us all of the ton miles in the state and all of the state ton miles and the percentage, for 1909?

A. The total ton mileage in the state of Minnesota, year ending June 30, 1909, was 1,121,821,283; and that of the intrastate business 121,569,265, or 10.837 per cent of the total ton mileage in the state.

Q. That is, of the ton miles produced on the rails in the state 19.837 per cent was strictly intrastate business?

A. Yes, sir.

Q. Does that refer to revenue tons?

A. Yes, sir, that is the revenue-ton mileage.

Q. And you told us, I think, that that would not include the company freight, as you have spoken of?

A. No, sir; that is excluded from that.

Q. I think you have told us that the company freight is about eighteen or twenty per cent of the total in ton miles?

A. About that figure, yes, sir.

The MASTER: Then, when you speak of revenue-ton miles, it excludes ton miles of the company freight?

WITNESS: Yes, sir.

The MASTER: And that has been the case all the way through in your testimony?

WITNESS: Yes, sir.

Q. Now, can you give us similar information as to all freight revenue in Minnesota for June 30, 1909, and the amount of revenue from intrastate business and the percentage of that of the total?

A. The total freight revenue in the state, during that year, was $9,761,844, of which the intrastate was $1,532,994.69, or 15.714 per cent of the total freight revenue.

Q. And the revenue per ton per mile on the intrastate business for the year ended June 30, 1909?

A. The average revenue per ton per mile was 1.262 cents.

Q. Or, expressed otherwise, that would be 12.62 mills per ton per mile?

A. Yes, sir.

Q. In your Ex. 51, when you were upon the stand, in the year to which that relates, you showed, based upon examination of certain representative periods, that the Minnesota intrastate ton miles was 12.33 per cent of the total ton miles?

A. Yes, sir.

Q. And that the revenue per ton per mile on that business apparent, I think, in the exhibit marked [illegible], as 2.231 mills per ton per mile as against 1.932 mills per ton per mile of the present year?

A. Yes, sir.

Cross-Examination.

By Mr. Dewees:

Q. Your Ex. 76 (way-bill) shows freight carried from Minneapolis, Transfer to Rapidan, Minn., and from Minneapolis, Transfer to Hillsboro, Minn.?

A. Yes, sir.

Q. My recollection is you said that there were interstate shipments?

A. Interstate shipments.

Q. There were interstate shipments?

A. Yes, sir.

Q. If those shipments also from Minneapolis, Transfer to Glenwood, Minn., two cents there, there were interstate shipments?

A. Interstate shipments, yes, sir.

Q. Can you tell me from this way-bill, or from from the way-bill, from other knowledge you have, whether the shipments from the Transfer to Glenwood, there on these way-bills were carried at the same rates as the same commodities would have been if they were interstate shipments?

A. Those two way-bills covering the interstate shipments, being carried at the minimum rate of 2½ cents, I am unable to tell you whether that would be the same as the through rate; in other words, whether the rate actually would have been the same as would be charged on a strictly interstate shipment of Minneapolis, Transfer.

Q. It is suggested to me that this same article is through rate, the rate would appear on the bill. This exhibit—

ity," and that the freight would be a proportion of that, and in the same amount.

A. That is to say, if the rate used would be shown as so much per hundred-weight out of a total of so much per hundred-weight?

Q. Yes.

A. That might be done, yes, sir.

Q. Ordinarily, with freight shipped from Minnesota Transfer, say to points in Minnesota, where they come on to your road at the Transfer for the first time, the rates charged are the same as if it had originated at that point, are they not?

A. In some cases, yes, sir.

Q. Well, isn't it true in a very large proportion of the cases?

A. I couldn't say that, off-hand, without making an examination of every way-bill, but I concede that there are many shipments that would be carried on the same rate as if it was actually intrastate business.

Q. So that it does not necessarily follow because it is an interstate shipment from the Transfer or other junction-point to some place on your line in Minnesota, that it is carried at an inter rate different from the intra rate?

A. Not always, no, sir.

Q. Calling your attention to Ex. 91, the three sheets of Ex. 91 are abstracts of local way-bills of freight forwarded from Minnesota Transfer, as I understand it, to some other point in Minnesota?

A. Yes, sir.

Q. The point in which forwarded from the Transfer is shown in the column "Kind of Freight," on these exhibits?

A. Well, it doesn't stop there.

Q. It doesn't stop there, but it is in fact shown there?

A. It is in fact shown under that heading, yes, sir.

Q. And taking this particular exhibit, or these three that

you have given us in this exhibit, it is impossible, without referring to the way-bills or other information, to tell whether the various shipments were interstate or intrastate?

A. Absolutely impossible.

Q. I noticed when the question was asked you on that point by Mr. Butler, his question was confined and your answer was confined to junction-points, and your answer was that in shipments made from junction-points the abstract of local way-bills would not enable you to tell whether it was an inter or intrastate shipment.

A. Yes, sir.

Q. Now, as to points or stations which are not junction-points, the ordinary station on your road, does not this abstract of local way-bills show not only the station from which the freight is forwarded but also the destination of the freight?

A. Yes, sir; and by the destination I mean to the station on our road to which it is destined, but not the ultimate destination.

Q. Not the ultimate destination?

A. No, sir.

Q. You would not have any record, then, other than the way-bill, showing whether a particular shipment from a way-station was an interstate shipment or an intrastate shipment?

A. No, sir, although it might be assumed, and with a fair amount of accuracy, that shipments originating at other than junction-stations destined to points within the state of Minnesota are intrastate shipments.

Q. In cases where the shipments were interstate and not intra, would not the abstract of local way-bills for freight forwarded indicate, by the charges or rate at which the freight is entered there, whether they were an intra charge or an intra rate, or whether it was a part of a through rate?

A. No, sir.

Q. You couldn't tell, then, anything from taking into con-

sideration the weight and the charge whether it was a part of a through rate or a local rate, pure and simple?

A. No, sir.

Q. You have testified that about one-third of the railroads, I believe, divide the common expense of operation between freight and passenger upon the basis of train-revenue mileage excluding switching?

A. Yes, sir; and that statement is based on an investigation of the subject by correspondence.

Q. On what basis do the other two-thirds of the roads divide this common expense?

A. As far as I am able to find out, they don't divide it at all; they make no attempt to divide it, because they don't make statistics as to passenger and freight business.

Q. Is there any difference in the practice of your road and these other roads that follow that method since the recent classification by the Interstate Commerce Commission?

A. The question isn't quite clear to me what you mean by difference.

Q. Well, is there any difference in the practice of your road and these other roads with reference to dividing these common expenses?

A. Not that I am aware of.

The MASTER: Doesn't that regulation call for a division?

WITNESS: No, sir.

Q. Now, that regulation calls for a division of the switching charges between freight and passenger, doesn't it?

A. No, sir.

Q. That classification?

A. Not as regards operating expenses, no, sir; it makes no provisions for any division between freight and passenger as regards operating expenses, whether they are common or otherwise; whether they are common, or freight or passenger, except as may be indicated by the title of the account itself.

Q. But it does divide the total of switching expenses from the total of the other operating expenses; it calls for that division?

A. The classification of the Interstate Commerce Commission now in effect sets aside in transportation expenses the various items entering into the cost of doing switching. However, this is only a partial cost of doing the switching business, because under the head of "maintenance of equipment" no segregation is made of the cost of repairing switch-engines separate from other engines in the service of the company.

Q. Now, as I understood your testimony, it was only the common expense between freight and passenger that you divided upon the revenue-train mileage basis?

A. Yes, sir.

Q. A large part of the expense I understood you to say could be fairly allocated as between the two?

A. Approximately, yes, sir.

Q. Will you tell us what proportion of the total expense can thus be approximately allocated, and what proportion of the total expense it is you will divide between freight and passenger on the revenue-train mileage basis?

A. In my judgment, about 47 per cent of the operating expenses may be assigned to freight or passenger service, not taking into consideration the element that I mentioned in my testimony of the movement of operating freight. The other 53 per cent is common to both classes of service.

Q. Isn't it true that ordinarily 25 per cent of the total expense would be nearer that which is common and may be distributed upon your revenue-train mileage basis?

A. Not according to my investigation, no, sir.

Q. Can you state, so we may have it for use in examining the tables and expense accounts, the heads of expenses or under which expenses are classified, which you treat as common and divide upon a revenue-train mileage basis?

A. I couldn't enumerate these off-hand, Mr. Durment.

Mr. BUTLER: Mr. Durment, that is all in evidence in a pamphlet of the Northern Pacific, which shows just how that is done. If it isn't in evidence it has been handed to the Master, you know. You remember it, don't you, General?

Attorney General YOUNG: Yes, I remember there was something of that kind, although I had forgotten it.

Mr. BUTLER: We can furnish it. There is a little pamphlet which has been handed to your Honor which shows just how each of all these numerous items is divided, as a matter of routine, and I think it is in evidence; if not, it is understood that all may use it, and if you haven't one we will give you one, Mr. Durment.

WITNESS: I know it was used because I have a copy of it here.

Mr. BUTLER: I think Mr. Elliott was on the stand when it was handed to the Master. You remember it, don't you?

The MASTER: I don't seem to recall it just now.

WITNESS: Here it is. This was read into the record in connection with Exs. 79, 87 and 88.

Mr. BUTLER: And I think we furnished you copies of it with that exhibit, though I am not perfectly sure.

The MASTER: Read into the record in Mr. Elliott's testimony?

WITNESS: I think so, your Honor. I know it came up, and I brought it up here to the court.

Mr. DURMENT: My recollection is that we have copies of that among the exhibits.

WITNESS: Yes, you have, I am quite sure.

Col. CLOUGH: I am sure of that, Mr. Durment.

Mr. BUTLER: At any rate, we will furnish it to the Master and to you. I think it was not marked as an exhibit, but it was either handed to the Master or read into the record; my impression is, only handed to the Master and not read in,

although I may be wrong about it. It may be considered as in.

Q. As I understand you, then, in the division of common operating expenses between freight and passenger, you ignore switching entirely?

A. Yes, sir.

The MASTER: I think the Master will ask why.

WITNESS: Because there are so many complications surrounding the division of all operating expenses that it has been assumed that to take the revenue-train mileage as the basis of division of such common items will approximately bring results that are fairly correct.

Attorney General YOUNG: Did you ever try to ascertain whether it would make any appreciable difference if you took switching costs into account?

WITNESS: No, sir, I have never experimented with it.

Q. As to the business or operation of the road for the year ending June 30, 1909, you gave us, I believe, the total ton miles of freight in Minnesota for the year?

A. Yes, sir.

Q. Also the total number of ton miles of that which was intra?

A. Yes, sir.

Q. You also gave us the total freight revenue for the state?

A. Yes, sir.

Q. And the total amount of that which was due to intra freight?

A. Yes, sir.

Q. Can you give us the total passenger revenue in Minnesota for that year?

A. Yes, sir.

Q. Divided between inter and intra?

A. Yes, sir.

Q. We would like you to do so, please.

A. Of course, I can't give it to you off-hand.

Q. I understand, but there are several of these things I want to call for, and you may make them in a statement for us.

A. Yes, sir, unless counsel objects.

Mr. BUTLER: It will all be in the annual report that will be compiled in a few days.

WITNESS: Oh, yes, wide-open information.

Q. Ordinarily your report to the State does not divide the operating expenses between freight and passenger?

A. No, sir.

Q. It does the revenue, but not the operating expenses?

A. That is true.

Q. But you keep on the Company's books, for the information of the Company, a division of operating expenses between freight and passenger as to the state of Minnesota, do you not?

A. Yes, sir, we keep that information.

Q. Ordinarily your books show the same total operating expenses as in the report to the State?

A. Yes, sir.

Q. Will you give us, also, the operating expenses for the year 1909, ending June 30, that is, the total operating expenses, and give us the separate amounts under the general headings? as I have them, they are maintenance of way and structure, maintenance of equipment, conducting transportation, general traffic expenses.

A. General and traffic?

Q. General and traffic.

A. Yes.

Q. General and traffic, under each separate head, with the total, and the division which your Company makes of them on its books, between freight and passenger?

A. Yes, sir.

Q. This applies only to Minnesota, of course, that I am asking for.

A. Yes, sir.

The MASTER: There has been something said heretofore about the allocation of the expenses, that 62 per cent could be allocated and 38 per cent divided; was that limited to transportation expenses? I understood you to say this morning 45 per cent would be allocated.

WITNESS: 47 per cent.

The MASTER: 47 per cent would be allocated; but somewhere in the testimony I got the impression that 62 per cent could be allocated. I think perhaps it might have been in Mr. Hillman's testimony.

WITNESS: The Master is quite right in that. That is to say, that the percentage of expenses that could be allocated was greater than 47 per cent, but my figure is based on a very deep investigation, and the difference between my percentage and that previously mentioned in this case is accounted for by the fact that when we put the entries on the books we had already divided some of the items which were common, but on our records they did not appear as a common item. The heading of the book is Freight, Passenger, Common. Now, having been divided before the voucher was posted, they were posted to either freight or passenger, whereas the expenses were truly common expenses.

The MASTER: Then, as I understand it, according to your book they would still show that about 62 per cent of the expenses were allocated?

WITNESS: On the books, yes, sir.

The MASTER: But you have since made a more careful analysis and examination of these expenses, and from that you determine that only 47 per cent are properly allocated, and the residue have been divided, and that, as I understand, refers

then to all the expenses and not limited to transportation expenses alone?

WITNESS: No, sir, that is according to my best recollection.

Q. In your division which would allocate directly 47 per cent, I believe you said—

A. 47 per cent of the expenses are by their nature either freight or passenger, that is what I mean, right from the inception of the expense.

Q. Now, in the 53 remaining per cent you treat them all as common?

A. Yes, sir, that is true.

Q. Are any of those expenses included in the 53 per cent such that they might fairly be allocated directly either to freight or passenger?

A. Why, you might use an approximation, but it would only be an approximation. It would have to be on some such basis as revenue-train mileage.

Q. But, as you said this morning, these are all in a measure approximations, even where you allocate directly?

A. Oh, they are to some extent, yes, sir.

Q. Now, going back to the figures for the year 1909, ending June 30th, I wish, if you can, Mr. Johnson, you would also give us, separately, the items charged in the operating expenses for that year for repairs and renewals and the amount included for depreciation, if you will.

A. You refer, of course, to maintenance of way and structures now, and not to maintenance of equipment, or both?

Q. Well, both.

A. Do I understand that you want that subdivided between freight and passenger?

Q. Well, if you have it. You have it divided so, haven't you, on your books?

A. Well, I don't know whether the work has been entirely

finished yet or not, but we may possibly be able to furnish it to you.

Q. Well, if you can I would like it. And then, as I remember, in your reports to the State, you report certain things which are freight and passenger revenue; some of it is directly freight and some of it directly passenger, and some of it common or general; and then you have certain other income which is not treated as derived from operating expenses or directly connected with it, which you report to the State also which show income and earnings. I would like to have a statement of that if it is ready for this year.

A. Do you refer to such items as outside operation and miscellaneous incomes, such as interest, etc?

Q. Yes. We have, for instance, from the reports of previous years, under that head, as your Company has classed it, dividends and stock owned, interest on bonds, rentals of leased property, interest on current accounts and balances, net receipts of stockyards, etc.

A. Then, as I understand it, Mr. Durment, you want practically an advance copy of the income statement of the Northern Pacific which will be rendered to the Commission this year?

Q. Well, the results of it. I have here as to the years 1905, 1906 and 1907, in tabulated form, the information which I would like to have as to the year 1909, and I will let you have a copy of it if you like.

A. All right, that will help make the matter clearer to me.

RE-DIRECT EXAMINATION

By Mr. BUTLER:

Q. Mr. Johnson, some reference was made to the agents' abstracts from stations other than junction-points; now, I want to get you to state what percentage, approximately, of the business of the Northern Pacific Company comes to its lines

at junction-points in this state, or delivered at junction-points; that is, if it is a junction-point at one end or the other; I will put it either to or from junction-points.

A. I made an investigation of that subject, and while I haven't the papers with me, my recollection is that it was between 60 and 70 per cent.

Q. Now, as respects the method of division of operating expenses between freight and passenger, as followed by other companies, in your direct examination you enumerated a number of companies, giving the mileage. In your cross-examination, I understood you to say to Mr. Durment, that the roads that you did not mention did not, as far as you knew, make the division at all.

A. Yes, sir.

Q. On their books.

A. Yes, sir.

Q. Do you know of any road of any considerable size that does divide the operating expenses between freight and passenger as a matter of routine work upon its books, that follows any method substantially different from that followed by the Northern Pacific and the other companies that you mentioned as following it in your direct examination?

A. No, sir, I do not.

By Attorney General YOUNG:

Q. It is true, is it not, Mr. Johnson, that, so far as the failure to take into account the switching mileage, in using your revenue-train mileage as a basis of division, the percentage of operating expenses would be unduly large upon the passenger business, for the reason that nearly all of the switching mileage is incurred in the freight business?

A. That would be true were it not for the fact that there are other expenses which the freight business carries and in which the passenger business should participate that would, in my opinion, offset any difference of that character.

Q. Well, ignoring those other matters for the purpose of this question and limiting yourself to the fact that you omit switching mileage, without taking into account for the time being those other items which you say the freight business carries part of which ought to be attributed to passenger, your answer to my former question would be yes, would it not?

A. Yes, sir, to some extent, but as to how much that would be I am unable to say.

Recess until 2 P. M.

AFTERNOON SESSION.

CHARLES F. STAPLES,
recalled on behalf of Defendants, testified:

By Mr. DURMENT:

Q. Mr. Staples, I understand that there is a matter in your testimony that you want to correct or further explain?

A. Yes.

Q. You may do so.

A. My testimony, pages 2875, 2876, 2966, 2967, 3007, 3008, (transcript) treats of the question as to how the schedule of rates found in Chapter 232 was made up. The testimony was not clear at the time, and I gave it as my best memory that the schedule was made up by taking the schedule found in the Commissioners' order of December 6th, relating to commodities, and adding 10 per cent of each rate to itself, using those figures as the schedule found in Chapter 232. Mr. Butler, in cross-examination, quoted from I think page 20 of the report of the Railroad & Warehouse Commission for the year 1907, where a history of the rate case is given, and in that history it appears that the rate of percentage was 7.37 increase over the schedule made by the Commission; but that is an error. I do not know who made it, but it is simply an error in writing up the history of the case; and I have prepared here a

schedule of rates made by adding 10 per cent to each rate found in the order of the Commission, under date of December 6th, and have put in, in red ink, the new schedule or the schedule which would be made by adding 10 per cent of each rate to itself; and I find that these red figures represent practically the schedule of rates found in Chapter 222; the only difference being, as I testified at the time, that a very small fraction of a cent may be dropped or added in certain cases, but indicates clearly that the new schedule was made up by taking the old one made by the Commission and adding 10 per cent of each rate to itself. I felt that that ought to be made clear because it was left so indefinite in my testimony, and I will file or hand this new schedule to the Master, and comparison can be made, if desired.

Mr. BUTLER: Yes, I would like to have a copy of it.

The MASTER: It could be put right into the record.

Mr. BUTLER: I don't know that it is important that it go in as an exhibit, because I am not sure, Mr. Staples, whether the schedule of rates made upon these commodities by the Commission itself in the order of December 6th, which was enjoined by a suit in this court by each of the railroad companies, has been offered in evidence in this case or not. Do you remember?

Mr. HOW: It has not; not in the Northern Pacific case.

Mr. BUTLER: No, I think it has not.

Attorney General YOUNG: Well, it will not be necessary, then, to offer this amended schedule.

Mr. BUTLER: I think, perhaps, it would be necessary, so that we may have before us the two schedules.

WITNESS: My purpose in offering this testimony at this time is simply this: the whole question relates to the manner in which the new schedule was made. That seemed to be the matter that was being particularly inquired into, and I thought my testimony was clear on direct examination, but

Mr. Bevan quoting from the report of the Committee, and finding there (as it does really) that the percentage would be 7.37, was in the natural expectation, but I think that is an error and that 10 per cent. is correct.

The Master. It appears to me this had better go to a scrutiny.

Mr. Bevan. I think it had better go to a scrutiny, and then it shows the votes which are.

The Master. It shows what the Committee intended to get in, and the increase that was made by the Magistrates over what the Committee intended.

Wynne. The printed figures show the schedule of votes which was made by the Committee and found to be correct on December 6th.

The Master. And which were human capacities?

Wynne. Which were human capacities. The added figures are found by taking each of the votes and adding 10 per cent. of the vote to itself, and supersede practically the schedule found in Chapter VII.

The statement was marked "Statement No. VII.—Singles."

Cross-Examination.

By Mr. Bevan.

Q. Mr. Singles, we would like to have your knowledge for the record in this case, the widest record upon all the subjects that notices were given to, of the appointed duties of the Committee with respect to the close votes here in Hingham, and also with respect to the ascertaining votes rejected by the vote-testing tester, together with the result therefrom of such action. Now, if this can be furnished in any form to us, we can probably get it in evidence without recalling the witness.

A. I would be glad to furnish it.

Attorney General Wynne. I think we have that in general.

Mr. BUTLER: Well, we want it offered, that is all.

Attorney General YOUNG: The parties appeared and participated in the investigation. One of them I think would be sufficient. If you want the form of the notice we can get it. They were all alike, weren't they?

Mr. BUTLER: Yes, of course, we need not duplicate the record, but I wanted it to appear what the Commission did and what they entered upon to make it more fully appear. Mr. Staples has told us, when he was on the stand before, something of it, but not on the precise point that I now mention.

Mr. DURMENT: Well, we shall object to it, of course, as immaterial, so as to save it on the record, and we shall ask to have submitted with it by Mr. Staples a statement or other evidence as to the roads which appeared and what took place between those appearing and the Commission or before the Commission with reference to these rates, after the notices were served.

Col. CLOUGH: Well, that all appears in the report of the Commission, doesn't it?

Mr. DURMENT: I don't know whether it does or not.

Col. CLOUGH: I think it fully appears.

Mr. DURMENT: Even if it does, we prefer to have a statement of it made and put in in connection with these notices.

Mr. BUTLER: Well, I have no objection to your offering what evidence you think is proper, but I wanted to get this in.

WITNESS: Will that statement, as I understand it now, you ask for, be combined with what Senator Durment suggests?

Mr. BUTLER: You can furnish me what I ask for and furnish him what he asks for.

The MASTER: Why, yes, Mr. Staples, you can make up that full statement. The Complainants may make use of or offer such portions as they see fit and the Defendants offer such portion of it as they see fit.

Mr. BUTLER: It may all appear in your published report.

Col. CLOUGH: I think it does, Mr. Butler.

Mr. HOW: In going over Mr. Berry's testimony with care, a suspicion overcame me that he had duplicated some (I think) miscellaneous buildings. I think it appears in his testimony how he happened to do that. He made that separate department of miscellaneous buildings after he had compiled all the buildings, and then didn't take the amount out of his original estimate of all buildings. I have his letter stating that that is the fact and offering to appear again and testify to that. It merely means that his general estimate is about eight million dollars more than he meant to have it. Now, I ask the privilege of filing his letter or reading his letter into the record, and that his appearance for the purpose of testifying to that be waived. It seems unnecessary to get him up here from Chicago. It is perfectly clear what he did and how he did it.

Mr. DURMENT: I can see no objection.

Mr. HOW: They make no objection to that, and I will either have his letter read into the record, or I will prepare a statement from it.

The MASTER: Suppose it be read into the record in connection with your statement now.

Mr. HOW: Yes; then I will furnish it to the Reporter.

The MASTER: Yes.

Mr. HOW: I will do that to-morrow morning.

CONWAY W. HILLMAN,
recalled on behalf of Defendants, testified.

By Mr. DURMENT:

Q. Mr. Hillman, I asked you to get together for us, in convenient shape to use, some figures for the years 1905 and 1906, years ending June 30, 1906, June 30, 1907, and June 30, 1908, as to the operating revenue and operating expenses of the Northern Pacific Railway, Great Northern Railway, and Min-

neapolis & St. Louis Railway, taking the figures from the reports of the respective companies made to the Railroad & Warehouse Commission for those periods, and dividing it so far as those reports did divide it between passenger and freight and inter and intra. You have furnished an exhibit showing that, as I understand, but in the division of operating expenses the division is made only between freight and passenger, and that division was taken from the books of account of the railroad companies and not from the report to the State Railway Commission; is that right?

A. That is right.

Q. As I understand you, with the exception of that division between freight and passenger for operating expenses, everything on these exhibits is taken from the reports of the respective roads filed with the Railroad & Warehouse Commission?

A. Yes, sir.

Mr. DURMENT: I will say this, that I think these exhibits, with the explanation made, will speak for themselves, except in one or two minor matters that I will call attention to now.

Q. As to the Northern Pacific Railway Company I find a division of operating expenses for the year ending June 30, 1906, according to Company's books and according to the report to the State. Will you explain why in that year for that road you show the division between passenger and freight of operating expenses in one column according to Company's books and one column according to the report to the State.

A. The report to the State does not agree with the report on the Company's books. The reason is stated in the note immediately to the right of these expenses, where it states "Included in the report to the State is $316,620.15, maintenance of way and structure renewal, and $283,289 maintenance of equipment, also from renewal fund," which is not reported on the Company's books as an expense. I state there that Mr. Johnson can explain the final disposal of this renewal item of

$599,909.15. I also make the further note that $40,547.56 switching is included in the Company's figures not in the state, as was explained in my Northern Pacific testimony.

Q. Then, as I understand it, the first column, first division, according to the Company's books shows the division between freight and passenger as they actually carried it on their books of account?

A. Yes, sir.

Q. For that year for operating expenses.

A. Yes, sir.

Q. But the report to the State was of an amount for operating expenses larger by the sum shown in this note you have just read?

A. Yes, sir, and I have merely prorated and carried the same prorata into freight and passenger as the original report shows.

Mr. BUTLER: Do I understand that the report to the State divides operating expenses between freight and passenger?

Mr. DURMENT: No.

Col. CLOUGH: He said he took that from the books.

Q. Now, then, the report made to the State does not divide between freight and passenger the operating expenses?

A. No, sir.

Q. Except in the one instance I call attention to here of the Northern Pacific for the years 1905 and 1906, all this information of the division was obtained from the books of the Company?

A. Yes, sir.

Q. How did you make up or what is the basis of your division of the expenses of operation reported to the State by the Northern Pacific Railway Company for the year 1905-1906?

A. I simply took the same percentage of the total amount reported to maintenance of way and structure that the division between freight and passenger showed on the Company's

books, and applied those percentages to the total as shown on the State report.

Mr. DURMENT: We offer in evidence Ex. 3-V—Hillman in the Northern Pacific case. Of course, it is understood that the explanation here made is as to all these cases—the explanation as to the manner of making up these is general to all the cases; and we will offer in each case the particular exhibit applying to the case.

WITNESS: Of course, the same difficulty that we mentioned there on the Northern Pacific statement of the difference of the report to the State and the Railway Company's books does not exist in the other reports.

Mr. DURMENT: That was made plain, I think.

Q. As I understand it, Mr. Hillman, the Great Northern Railway Company for the years 1905-1906 and 1906-1907 (that is, the fiscal years,) did not include in its report to the State the business of the Willmar & Sioux Falls Railway?

A. No, sir, it did not.

Q. But for the year 1907-1908 it did include the Willmar & Sioux Falls business in the Great Northern report?

A. Yes, it did.

Q. But for the years 1905-1906 and 1906-1907, the Willmar & Sioux Falls, which was then affiliated with the Great Northern, filed a separate report?

A. Yes, sir.

Q. And you have, at my request, prepared a similar tabulation as to the Great Northern Railway for the years 1905-06, 1906-07 and 1907-08, and a similar tabulation for the Willmar & Sioux Falls for the years 1905-06 and 1906-07?

A. Yes, sir. I file these Great Northern and Willmar & Sioux Falls statements as separate exhibits, as they are on separate sheets.

The Great Northern exhibit was marked "Defendants' Ex. I—Hillman."

Mr. DURMENT: All these exhibits are offered in evidence. We offer in evidence Ex. J which is a tabulation as to the Willmar & Sioux Falls road.

The MASTER: Do I understand the testimony is closed now?

Attorney General YOUNG: Substantially closed.

Mr. DURMENT: Substantially closed except as to one matter, in the Great Northern case, that we want some figures upon and some investigations with reference to. The matter is under consideration now as to whether we will be given the information so we can take it at this time or whether we will have to take some other proceeding, and we won't know for two or three days, but we don't want to close this case, particularly the Great Northern, until we determine what we can do about that matter. As to the other cases, I understand they are closed, except putting in a stipulation that they have agreed upon, and one other small matter that will be admitted if it is found material I am told.

Attorney General YOUNG: And you might state, further, that the matter concerning the Great Northern is matter to be taken from their books and one about which there can't be any controversy, and after we have the information it may be offered in the case, but it will be very short.

Mr. DURMENT: Well, we expect to get evidence there which we will offer.

Attorney General YOUNG: Yes, but I say it will be mere information from the books.

Mr. DURMENT: It may be that there will be no dispute about it, that we may agree upon it as a table and put it in easily, but the case ought not to be finally closed at this time until we determine whether we can do it in that way or whether we will have to take evidence.

Mr. HOW: There are some matters taken from the official report of the Comptroller of the Currency to the Speaker of

the House of Representatives for the year 1907, which we shall want to refer to upon the argument, and, if satisfactory, perhaps it had better be before the Master, and we will have that put right into the record. It is a statement of the average results of the business of the national banks of the United States for a period of thirty-eight years, showing their capital and surplus, net earnings, and so on, with the average results. That is, we desire to use it in our argument upon the question of reasonable return.

Mr. DURRENT: Does it state where the report was taken from?

Mr. HOW: Yes.

Attorney General YOUNG: It is a matter of public record. They can refer to it in their argument.

Mr. HOW: It is a public record and I suppose we can refer to it, but I thought perhaps the Master might like to have it before him, and if so we will put it right into the record.

The MASTER: It may go into the record.

The statement referred to is as follows:

"Average results of the business of the national banks of the United States, for the period of thirty-eight years, from 1870 to 1907, inclusive, as shown by the official report of the Comptroller of the Currency to the Speaker of the House of Representatives, for the year 1907.

Page 240

Capital	$578,251,374
Surplus	205,100,039
Capital and surplus	$783,357,413
Dividends paid	50,660,236
Net earnings	66,647,167
Dividends to capital	8.76%
Dividends to capital and surplus	6.47%
Net earnings to capital and surplus	8.58%

Average results of same business for 10 1/3 years, March 1, 1897, to June 30, 1907: Computed from same statistical table.

Capital	$672,072,739
Surplus	319,604,317
Capital and surplus	$991,677,056
Net earnings	97,640,179
Net earnings to capital and surplus	9.84%"

Mr. How: It is stipulated that any and all the evidence offered and received, or which may hereafter be offered and received, in either of the cases, of Shepard vs. Northern Pacific Railway Company and others, Kennedy vs. Great Northern Railway Company and others and Dimock vs. Great Northern Railway Company and others, consolidated, and Shillaber vs. The Minneapolis & St. Louis Railroad Company, in so far as the same, or any part thereof, may be applicable and material to the issues of either suit, may be read and considered in the determination of each other suit, to the same extent as if the same had been offered and received therein.

It is stipulated that the following may appear of record:

In Complainant's Exhibit 25-Berry there are contained estimates of "Some of the Large and Important Bridges, $9,349,301; Balance of Important Bridges, $2,117,404; Balance of all kinds of Water Ways, etc., $8,878,229," a total of $20,344,934. The Exhibit shows that the witness prorated over the system in his per-mile estimate $9,577,134 for bridges. This amount should be eliminated in the same manner as heretofore appears in the record his prorated $1,843,068 for Miscellaneous Buildings should be eliminated. In addition to the elimination of these amounts caused by duplication in the prorating of the respective sums of $9,577,134 for bridges and $1,843,068 for miscellaneous buildings, being a total of $11,420,202, there should be further subtracted from the total of Berry's estimate as contained in his Exhibit No. 25, 10% of the total of these

two respective amounts estimated for contingencies, and 4½% thereof estimated for engineering, and 3% thereof estimated for interest during construction, so that the total estimate should be corrected to $380,731,446.89, and the average cost per mile for construction should be corrected to $47,337, and the total average cost per mile including real estate, to $65,812 per mile.

Berry's statement with regard to the cause of the duplication is as follows:

"I regret both of these corrections but you will remember we were under considerable pressure to have this estimate ready for the time set for my testimony. We worked week-days, Sundays, nights, for some time before, to get it ready, and we did not complete the estimate until midnight of the day before I began my testimony, leaving no chance to check it over. In addition, you will remember I was far from feeling well, and had not felt like myself for two weeks before I began to testify. I was tempted, the morning I went on the stand, to ask for an extension of time until I felt better, but as everybody was on hand I thought I would not ask for a postponement."

Adjourned.

FEDERAL BUILDING, St. Paul, Minn., Tuesday, January 25, 1910.

On this day the following proceedings were had in this case:

Mr. DURMENT: I will hand to the Reporter (just as we did this morning in the Great Northern case,) a stipulation of facts as to the Northern Pacific Express Company and the Northern Express Company,—which may be put in as an admission of facts without any admission as to the effect of them.

Mr. HOW: Yes, it is stipulated that the facts are stated in substantial accuracy.

The MASTER: Then the following facts are stipulated?

Mr. DURMENT: Yes.

Said statement is as follows:

NORTHERN EXPRESS COMPANY.

It was shown by the testimony of Mr. Gray, that the Northern Pacific Railway Company owned the capital stock of Northern Pacific Express Company, amounting to $343,000 par value. The report of Northern Pacific Railway Company for the year ending June 30, 1909, filed with the Railroad & Warehouse Commission of the state of Minnesota shows that it still owns that stock.

Northern Express Company has filed a report with the Railroad & Warehouse Commission of Minnesota for the year ending June 30, 1909, which shows that it is a corporation organized under the laws of the state of New Jersey in 1906; that Northern Express Company is controlled by the Northern Pacific Express Company, and that that control was established by purchase; that Northern Express Company has 50,000 shares of the capital stock of par value of $100 a share, amounting in the aggregate to the par value of $5,000,000, and that the whole of said capital stock was issued in exchange

for an assignment to it of the contract between Northern Pacific Railway Company and Northern Pacific Express Company, giving exclusive rights, and running for fifty years. A copy of the said contract is presented herewith.

The persons who are named in the said report of Northern Express Company as its directors, are the President, First Vice-President, Second Vice-President, General Counsel and Secretary of Northern Pacific Railway Company. The same person who is second vice-president of the Northern Pacific Railway Company is president of the Express Company. The same is vice-president of the two companies. The same is treasurer of the two companies. The same person is general counsel for the two companies, and the same person is comptroller of the two companies.

The said report of Northern Express Company shows that on June 30, 1909, it had net cash assets over current liabilities of $318,946.51; that the total cost of all its properties to June 30, 1909, had been $189,408.54, and that it was inventoried as of that value on June 30, 1909; that its gross receipts from operation for that year were $3,103,462.48, out of which it paid for express privileges $1,489,149.70, of which $1,434,877.14 was paid the Northern Pacific Railway Company and various other small sums to other railway companies, a number of which, if not all of which, were owned or controlled in whole or in part by the Northern Pacific Railway Company, and in addition thereto, for operating expenses, $850,238.53, leaving a net operating revenue of $764,074.25, out of which it paid $40,707.82 for taxes, leaving an operating income for the year of $723,366.43. In addition to this operating income, it had an income of $28,098.04 from securities and stocks owned or controlled by it; that out of this income it paid 8 per cent dividend on its $5,000,000 of capital stock, and paid $100,000 in extinguishment of contract, and then carried $251,464.47 to the profit and loss account as a profit for the year.

ARTICLES OF AGREEMENT, Made the 30th day of June, A. D. 1906, between NORTHERNN PACIFIC EXPRESS COMPANY, a corporation under the laws of the state of Minnesota, hereinafter called the Express Company, and NORTHERN PACIFIC RAILWAY COMPANY, a corporation under the laws of the state of Wisconsin, hereinafter called the Railway Company, WITNESSETH:

WHEREAS, The parties entered into a contract dated the 1st day of July, A. D. 1897, to continue for twenty years from that date, under which the Express Company is now transacting a general express business over the lines of railway owned and controlled by the Railway Company; and since the date of said contract the lines of railway of the Railway Company have been greatly improved and extended, and will be further greatly improved and extended; and,

WHERRAS, In view of the greatly extended field of such business, present and prospective, it is desired by each party that the transaction of the express business over the present and future lines of the Railway Company, and the adequate service of the public in that respect, be insured for the term of at least fifty years;

THEREFORE, in consideration of the premises and of the mutual agreements herein contained, the parties agree with each other as follows:

ARTICLE I.

Said contract, dated the first day of July, A. D. 1897, will be terminated upon the close of business June 30, A. D. 1906, and this contract will thereupon become immediately operative and will continue during the term of fifty years from and after that date and bind the successors and assigns of each party.

ARTICLE II.

The Railway Company hereby agrees to and with the Express Company to furnish to the latter, for its sole and exclusive use as an express carrier for hire, such suitable cars or space in cars upon the passenger trains run upon the several lines of railroad at any time during the term of this contract leased or operated by the Railway Company, as the Express Company may require for the convenient transaction of its said business of express carrier.

The cars and parts of cars furnished the Express Company in pursuance of this contract are to be kept in order and condition suitable for the business of the Express Company, and are also to be kept lighted, warmed and cleaned by the Railway Company.

And the Railway Company further agrees to transport in the said cars and parts of cars assigned to the use of the Express Company such messengers, safes, furniture and express matter, as the Express Company may desire to have transported therein, between any and all stations on the aforesaid lines of railroad, at which the trains hauling such express cars or cars may make regular stops; but no more than ten tons weight altogether shall at any one time be placed by the Express Company for transportation in any such whole car, nor more than five tons weight in any such half car, without the written consent of the Railway Company so to do having been first obtained.

ARTICLE III.

As compensation for the said facilities and transportation afforded by the Railway Company to the Express Company, the latter agrees to pay the former a sum of money equal to fifty per cent of its entire gross express earnings upon the lines covered by this contract.

The Express Company agrees that within thirty days after

Company shall conform to all reasonable rules and regulations that may be established by the Railway Company in regard to the handling or storing of such articles in its trains or upon its premises.

ARTICLE V.

The Railway Company shall at all times be entitled to make and enforce all such reasonable rules as it shall deem necessary for regulating the loading and unloading of the cars assigned to the use of the Express Company, and for ascertaining the kind, number and weight of the articles transported in such cars, and for the care of such cars while lying at terminal or other stations and for the handling of the same while in trains, and for the conduct of persons riding therein as the messengers of the Express Company.

And the Express Company agrees not to suffer any person or persons to ride in any such car, save the messengers of the Express Company then actually in the custody of the contents thereof, except by the written permission or request of the general manager of the Railway Company.

And it is further agreed that all messengers and other employes of the Express Company shall, while riding in or engaged about any such car, be subject to all rules of the Railway Company, regulating those engaged in its service and occupying places in or upon its trains.

And the Express Company further agrees that in case of any disobedience by any of its employes of any order properly given by any officer of the Railway Company, or of the disregard by any such employe of any rule or regulation to which such employe shall be subjected by the terms hereof, upon notification in writing of such default being given to the Express Company, it shall be the duty of the Express Company to forthwith discharge such offending employe, and not to re-

engage him without the assent in writing of the general manager of the Railway Company.

ARTICLE VI.

The Railway Company is hereby released from liability for loss of, or damage to any article transported in any of the same cars for the Express Company arising from theft, robbery, mob violence, or fire, or from any other cause, save the gross negligence or wilful misconduct of the agents, servants or employes of the Railway Company.

ARTICLE VII.

In case the Express Company shall fail to make to the Railway Company any of the payments of money hereinbefore provided to be made by it in the time or manner hereinbefore provided, or shall fail to observe any other duty imposed upon it by this instrument, and in case such default shall continue for a space of sixty days, then and after the elapse of said sixty days all rights, accrued to the Express Company by this instrument shall, at the option of the Railway Company, forthwith cease and determine, and by such default and its continuance, as aforesaid, the Express Company shall, at the option of the Railway Company, be deemed to have waived all right to transact business thereafter upon the lines of railroad owned or operated by the Railway Company.

ARTICLE VIII.

The Express Company shall promptly carry, between all stations to which the said cars assigned to its use, or any of them, may run, and safely deliver, free of charge, all moneys and other valuable packages belonging to the Railway Company which the Railway Company may desire to have so transported.

ARTICLE IX.

This contract may not be assigned, either in whole or in part, by the Express Company to any other person or corporation, without the assent in writing of the Railway Company.

IN TESTIMONY WHEREOF, The parties hereto have caused these presents to be subscribed by their respective presidents or vice-presidents, and their respective corporate seals, attested by the signatures of their respective secretaries, to be affixed hereto on the day and year first above written.

NORTHERN PACIFIC EXPRESS COMPANY,
By J. M. HANNAFORD,
President.

(SEAL)

Attest:
R. H. RELF,
Secretary.

NORTHERN PACIFIC RAILWAY COMPANY,
By JAS. N. HILL,
Vice-President.

(SEAL)

Attest:
EDWARD A. GAY,
Assistant Secretary.

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